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IN MEMORIAM.

AN ADDRESS IN MEMORY OF PROF. R. BEVERLY COLE.

By WM. WATT KERR, M. A., M. B. C. M.

Delivered before the Students of the Medical Department of the University of California.

Colleagues and Students: While we pause in the midst of our work for a few minutes, to pay these last tributes to the memory of our departed friend, let us lay aside the fanciful creations born of sorrow, and think of Dr. Cole as we knew him; think of him as he lived among us, with his virtues and his faults, his deeds of greatness and his shortcomings; think of him as he was; think of him as a man. His faults were not of great magnitude, and would have passed without notice or criticism in the great majority of men; but, as the speck upon the burnished armor is made evident by the brilliancy of its surroundings, so his shortcomings were brought into prominence by the luster of his nobler qualities. It is well for us to remember him just as he was, just as he wished to be remembered; for, when we look around and see the vast amount of good he accomplished, we may take courage from the example he gave us of what may be obtained by steady perseverance and attention to duty.

The death of Prof. R. Beverly Cole marks an epoch in the history of this department; for through it we lose a gifted teacher, a wise counselor, and a magnificent executive officer. Our meeting to-day in this class-room, and at this hour, recalls the voice that only a short time ago was heard from this rostrum, but which is now forever still; yet, though he be dead, his works still live, and his memory will be kept green in the annals of this college.

Dr. Cole was a man of marked characteristics; he was a natural leader of men, possessing all the positiveness and self-reliance that are the necessary attributes of the pioneer; indeed, it was those very properties which gained for him his warmest friends and his most bitter opponents. It was utterly impossible that a man of his disposition, a man who would not allow any obstacles to remain in the way of his attaining an end in the justice and wisdom of which he believed, could go through life without hurting the feelings of many of those with whom he came in contact; but, after the conflict was over, and the heat of debate had cooled, there was not anyone who regretted so deeply as Dr. Cole himself the wounds he had inflicted.

Dr. Cole was born in August, 1829, and graduated from Jefferson Medical College, Pennsylvania, in March, 1849, just five months before the completion of his 21st year. His graduation marked the commencement of his career as a teacher, because he at once became a demonstrator in anatomy, and continued in this work until his departure for California, where he arrived in 1852. His ability as a surgeon immediately placed him in the foremost rank of practitioners, and in 1856 we find him holding the position of Surgeon to the "Vigilance Committee," which rescued San Francisco from a state of anarchy. It was about this time that the first attempt to organize a medical school in San Francisco was made. Dr. Cole and a few other kindred spirits used to meet upon certain afternoons in the week, and lecture to one another, and, in 1850, these same gentlemen organized the Medical Department of the University of the Pacific. In 1870, Dr. Cole left this school to enter the faculty of Toland Medical College, and it was through his efforts that our present relations with the University of California were consummated. From this time until the day of his death the great object of his life was to further the interests of the Medical Department of the University of California.

Those who were intimately associated with Dr. Cole know how closely to his heart lay this college. My own relations with him as a member of the faculty, for nearly fifteen years, enabled me to testify to his constant devotion. When the bill, asking appropriations to erect this building, was before the legislature, he was in very poor health; and yet, upon two occasions, when the state of affairs was critical, and the loss of the bill seemed certain, he arose from his sick-bed and went to Sacramento, that he might lend his personal influence in averting a defeat; his whole prayer at that time was that he might live to see the new buildings erected; indeed, it was the opinion of the colleagues who attended him that the determination to see this project completed did much to restore him to health. Even during the last two years of his life, it was surprising to note the alacrity with which he responded to the call of duty. At a time of life when most men are laying their burdens down, he would respond to the call of his patients irrespective of the hour; there was no shirking, and what he undertook to do was done, and was well done. We do not mourn for him; we mourn for our loss that we should be deprived of his fellowship and sage advice. He frequently expressed the belief that his work was done, and that he was both ready and willing to die. Upon the day on which these buildings were formally opened, he said: "My work is done. I care not now how soon the Lord calls me."

When you remember that, in addition to his college work, he took a deep and active interest in public affairs, and attended to the demands of a practise, that until a very few years ago was one of the largest in California, you can have some idea of how busy and how great a man he was.

Dr. Cole's ability as an executive officer was even excelled by his power as a teacher. The students of to-day have not known him at his best; but, until his health began to fail, nearly ten years ago, he had not his equal as a teacher in the West. He was fully abreast of the time, an able diagnostician, a dexterous operator, and capable of imparting much of his fund of knowledge to those who were privileged to study under him. He was a constant reader, who winnowed the wheat from the chaff, and was careful to instruct his class only in those methods which time, experience and a mature judgment convinced him to be safe and reliable. Each year he recognized more fully the responsibilities of the teacher, and believed it to be his duty to ground his students thoroughly in the great fundamental facts of medicine, to train them to observe and think methodically, to recommend for treatment only such methods as he was convinced were reliable rather than to swamp them in the sea of ephemeral theories and remedies which rushes from the warehouse of the publisher and the laboratory of the manufacturer. Dr. Cole was a progressive man, but he did not believe in airing his knowledge by putting before his class debatable questions, which would only perplex the students who were not sufficiently familiar with the principles of medicine to enable them to discuss the matter intelligently. In his teaching he followed the advice of the apostle Paul to the early Christians: "Prove all things; hold fast that which is good." He was a much more studious man than many people supposed him to be, and it may interest you to know that he spent the last night of his life reading a recent work on medicine; two hours after he closed his book, he was attacked by the malady which proved fatal less than three hours later.

It was in recognition of his merits as a teacher and scientific man that he was elected to the presidency of the American Medical Association, in 1895, the highest honor in the gift of the profession. This was particularly gratifying to his friends upon this coast, because it convinced men that their estimation of the man was not based simply upon local prejudice and personal friendship, but that their opinions were likewise those of men far removed from the possibility of any such bias.

The versatility of the man's genius and the extent of his energy are still further demonstrated by the prominent part he took in the affairs of the state and city. He was not a drone in the political hive; for him there was no rest like a change of occupation, and so even in this phase of life, we find him throwing himself heart and soul into his work. There are a few men who, if placed in any gathering of their fellows, will, by some law of natural selection, always rise to the top. Dr. Cole was one of these, and, in addition to discharging faithfully all the multifarious duties which have been already mentioned, he would be discovered holding some state or civic office, presiding at some committee or public meeting, or, during a political campaign, canvassing the state in behalf of his party. He carried out his work in this field with the same vigor and thoroughness that characterized his actions along all other lines; and many of the public improvements in San Francisco, such as Golden Gate Park, were largely due to his enterprise. He was a thorough San Franciscan; his belief in the future of this city and his loyalty to its interests made him part of its history, so that one of his colleagues, on being informed of our loss, truthfully remarked, "A piece of old San Francisco has departed." His voice will be missed from our councils and his familiar face from among the congregations of men; but he fought a good fight, he finished his work, and over his grave we may pronounce the benediction, "Well done, thou good and faithful servant."

ANGIOMA OF THE INTERNAL JUGULAR VEIN, PLUGGING OF THE LATERAL SINUS AND LIGATION OF THE VEIN.

Recovery.

By W. S. Thorne, M. D.

Read before the San Francisco County Medical Society, March 13, 1900.

Mrs. A. C. M., white, American, aged 35, came to St. Mary's Hospital Jan. 13, 1899, complaining of a swelling of the face. She has had a rumbling noise in the ear of this side for five years, and two years since she began to experience dizziness, more pronounced when stooping. One year ago she first observed the present swelling. She has no living children; has had five premature births. Three years ago Dr. Davie, of

Victoria, B. C., removed a left ovarian cyst. The patient is a slight woman, of fair physical appearance; heart, lungs, and temperature normal; but is growing more nervous, sleeps badly, and appetite is indifferent; says she feels unsteady when walking, and the dizziness is increasing. In the erect position, the left side of the face and neck appears quite natural; but on stooping forward, the head pendant, a swelling slowly appears in front of the left ear, that gradually increases, extends up above the zygoma into the temples, and finally down below the angle of the jaw as low as the thyroid cartilage. When fully distended, the greatest fulness is at the angle of the jaw. The same phenomenon occurs when the patient is recumbent on the left side. The tumor is soft, non-pulsating, and no bruit can be heard over it. Firm compression of the great vessels of the neck causes the swelling to reappear. There is no atheroma apparent, no arcus, no history of gout, rheumatism, or syphilis, if not furnished by the occurrence of repeated miscarriages. The patient says the swelling is increasing as well as the noises in the head and the dizziness. Examination of the blood shows simple anemia, and she was placed upon a generous diet for three weeks. Iron was administered, also trional at night to promote sleep. In three weeks following, she improved perceptibly, and gained in weight, strength, and spirits. Careful and repeated examination of the swelling leaves no room to doubt its gradual increase. Dr. Stillman saw the case with me at the time, and confirms the opinion that it is a lesion of the internal jugular vein. On the 5th of February, 1899, assisted by Drs. Stillman, Bailly, and Thorne, the lateral sinus was exposed by a bone drill, propelled by a dental engine. The opening thus made was the size of a 5-cent silver piece. It was firmly packed with gauze, sufficient to obstruct it completely. An incision was then made over the great vessels in the superior carotid triangle, and the sheath of the carotid opened, and the internal jugular isolated, ligated with catgut, and the sheath closed. A transverse incision was then made from the outer angle of the malar bone upward across the temple two inches or more, and a congeries of tortuous and dilated vessels exposed. To obliterate them, gauze was firmly packed into the opening. The first dressing was made on the 5th day, and the second on the 8th day. The pulse after the operation fell to 40, and the respiration to 12 and 14, temperature 99 degrees. There was mild delirium at night. The pain was very severe, and was referred to the left frontal region and the top of the head. During the three following weeks she had three attacks of right hemiplegia, lasting half an hour or so each. The first two occurred in the second week, and were marked by an interval of 24 hours, and the third by an interval of 48 hours. These attacks did not recur, and were followed by no appreciable sequelae. Immediately after the operation, all surrounding objects appeared greatly exaggerated in size, and this hallucination continued for five weeks. At the present time she is myopic, and can not read for any length of time. Six months after the operation I find the patient's condition as follows: She has gained ten pounds in weight, but is easily fatigued, and the pulse is weak; heart sounds normal; has severe headache at times; and there is a slight loss of memory. Five weeks after operation she had a severe attack of typical angina pectoris, the pain running down the left arm. The attack lasted about half an hour, was relieved by a subcutaneous injection of morphin, and did not recur.

A review of this case shows the diagnosis of angioma to have been erroneous, so far as concerned the internal jugular vein. It was a dilation of the vein in the upper part of its course, and should be termed, therefore, a varix. An angioma is a tumor composed of blood-vessels. The blood-vessels comprising the tumor are mostly of a new formation, though the vessels of the part where it is situated may enter more or less into its formation. The congeries of vessels exposed by the transverse incision at the temple, were new formations, belonging to the external jugular system, and constituted, therefore, a technical angioma. Hence we had a varix of the internal jugular and angioma, comprising the radicals of the external jugular vein. A simple ligation of the internal jugular vein, below the dilated part in the superior carotid triangle, would not have sufficed. The sac would still have filled through the abundant anastomosis incident to the head and neck, and dilation gone on as before. The only radical method was to close the jugular at its source within the cranium, viz., at the lateral sinus. I have thus far failed to find in medical literature an analogue of this case or the method pursued to relieve it. I shall feel greatly obliged to any gentleman of the society who has been more fortunate than I, or whose erudition is more extensive.

815 Sutter Street.

INDICATIONS FOR THE USE OF PROTARGOL IN GONORRHEA.

By A. B. Grosse, M. D

Read before the San Francisco County Medical Society, January, 1901.

If we wish an intelligent idea of the effects and the reason for administering drugs in gonorrhea, we must clearly understand the action and conditions of the gonococcus in the various phases of the acute process and therefrom arrive at our deductions.

The mucous membrane of the urethra in the fossa navicularis has several layers of pavement epithelium, and that bordering on this is the cylindrical epithelium of the anterior urethra, which consists of an upper layer of cylindrical epithelial cells, a layer of transition cells, and a lower layer of cubical cells, and next to this is the epithelial connective tissue with its cell nuclei and capillaries. The cocci, which enter the urethra at the time of the infection, act in the following manner: On the pavement epithelium they multiply along the surface, sometimes even entering the interepithelial spaces, but never going to any depth, as the pavement epithelium checks their advance. As soon as the gonococcus reaches the cylindrical epithelium the aspect changes. The gonococcus here not only grows on the surface, but also between the epithelial cells, multiplies in the interepithelial spaces, and gradually pushes its way between the cubical cells of the lower layer or into the upper layer of the connective tissue. Through this encroachment between the epithelial cells the connection of the latter is loosened. They drop off or degenerate, mucous degeneration. To this there is added another important factor, i. e., the generation of toxic substances by the gonococci, which irritate the mucous membrane, resulting in inflammation. The blood-vessels of the sub-epithelial connective tissue dilate, and from the dilated blood-vessels, the walls of which are now permeable, due to inflammatory irritation, a stream of pus, serum, and polynuclear leucocytes is discharged, which migrates toward the surface, crowding between the epithelial cells, and so meets the gonococci.

From the time when the leucocytes migrate and move toward the gonococci, the actions of the latter are changed. While up to this time they invaded the connective tissue, they now approach the pus cells and enter their cell body. It is an important fact that the gonococcus finds its chief nourishment in the cell bodies, although it can exist in the upper layer of the connective tissue. As the gonococci enter the pus cells and there multiply, the pus cells become loaded with them. This has the effect of expelling the gonococcus from the deeper layers, as the pus cells, when they migrate from below upward and are then invaded by the gonococci, keep on their course until they reach the surface of the mucous membrane, and are washed away by the urine. "The pus cells, though consumed by the gonococci, have the power of ridding the urethra of the gonococcus,—the microscopical picture." The nature of this process is one of repair, as the stream of pus cells and serum which pushes through the connective tissue and between the epithelial cells towards the surface, checks materially the downward course of the gonococci. The beneficial results of this will be seen in the cases which run a normal and spontaneous course, as in the third week after the infection one sees quite a different condition. The connective tissue still shows dilated blood-vessels, from which pus serum and pus cells exude, but gonococci are at this time not found, or only very rarely an occasional one is seen. In the epithelium a peculiar reparatory process is going on, so that it may resist the renewed encroachment of the gonococcus. From the remnants of cells which have remained from the acute stage, a multi-stratiform layer of pavement epithelium is formed in the manner of an epithelial metaplasia. The gonococci in this second stage are found almost exclusively on the surface of this pavement epithelium. Here they still cause inflammation, and in connection with this the migration of leucocytes to the surface occurs, which again becomes loaded with gonococci. The upper layer of the pavement epithelium desquamates. In the normal and spontaneous cases the number of the gonococci decreases more and more, their elimination becoming more profuse; and at last at the end of the fifth or sixth week the gonococci disappear entirely from the urethra in a certain percentage of the cases. Inversely, as the gonococci decrease the inflammation abates.

If one in the second stage of an acute gonorrhea exposes himself to external irritations—as a coitus or an excess in Baccho—in what manner would the inflammation recur? The actions of these factors are always similar to that of an erection, causing a hyperemia of the mucosa, and in an inverse ratio as the hyperemia increases, so also increases the exudation of pus serum and pus cells. The epithelium becomes torn, jagged, literally torn asunder, and into these crevices the gonococcus again penetrates, causing a similar series of symptoms, in fact, reproducing conditions previously described.

The longer the gonococcus remains in the tissues under these conditions, the more another factor must be considered. The mucosa becomes gradually more and more accustomd to the toxins, the inflammatory reaction decreasing with each recurrence, having as its result that, after the third or fourth relapse, the gonococcus is never entirely eliminated from the tissues. The permanent irritation that the gonococcus causes, creates a proliferation of the surrounding connective tissue, an infiltration composed of mononuclear cells is formed, which are generated by proliferation of the connective tissue cells. When this occurs, the process has become chronic.

From this brief description of the pathology of the gonorrheal process, we can understand the division of acute gonorrhea into two stages: the stage where the gonococci are deep-seated, and the stage where they are superficial. Also the explanation of the relapses, and the consequent chronic changes caused by the gonorrheal process. During the first 14 to 21 days we find the secretion to consist almost entirely of pus cells generally carrying gonococci, and occasionally pavement epithelium from the fossa navicularis. In this stage the symptoms are most acute, the secretion plentiful, thickish, and yellowish green, with consequent pain on urination or during erection. As soon as the gonococci are only on the surface, the acute symptoms gradually abate, and we have the disease entering upon the second stage. The secretion becomes more milky, and the pains upon urination and during erection cease. In normal cases of gonorrhea we see this at the end of the third week. The secretion then does not only carry pus cells loaded with gonococci, but also the various types of epithelium, as transition and pavement cells covered with gonococci. As soon as we find the epithelial cells covered with gonococci, we are certain that the metaplasia of the epithelium has taken place. From the above we will be able to choose one of the remedies at our disposal, which are divided into, (1) simple antiseptics; (2) antiseptic astringents; (3) simple astringents.

That gonorrhea heals spontaneously has been reported by all genito-urinary surgeons of note, and in the following manner, i. e., by the pus cells carrying off the gonococci. Naturally, rest in bed, avoidance of indiscretions, will influence the course favorably, while sexual irritation, pollutions, new infections, the injection of alcohol, and cases which are treated in their ordinary conditions of life, tend towards chronicity. Our reason for the treatment of gonorrhea is the decided shortening of duration as well as the fact that ambulatory cases usually tend towards chronicity. The simple antiseptics, most representative of which are protargol and largin, have a gonococcocidal action, hence quickly check inflammatory changes, and eliminate the cause. The antiseptic astringents, which act on the one hand as antiseptics, on the other as astringents, are nitrate of silver, argonin, argentamin, itrol. These are gonococcocidal preparations, and at the same time decrease the hyperemia of the mucosa by contracting the blood-vessels, and thus prevent the escape of pus cells and serum. The astringents, always very numerous and formerly almost exclusively used, are zinc sulphate, resorcin, permanganate of potassium, lead, and alum. These remedies, which have no gonococcocidal action in the strength in which they are applied, do not decrease the number of gonococci, but decrease secretions. Theoretically the antiseptic astringents should be almost specific in their action, i. e., destroying gonococci and contracting vessels. In practice this does not hold. As they have an astringent action, they decrease secretion; but in the first stage of the process, when the gonococci are deep-seated in the epithelium and in the upper layer of the subepitheloid connective tissue, in the ducts of glands and lacunae, they do not have a sufficient antiseptic action. The principal condition necessary for the satisfactory action of an antiseptic is its direct contact with the virus, as only those bacteria which come in contact with the drug are destroyed. All antiseptics act inasmuch as they coagulate albumen. When nitrate of silver solution comes in contact with the mucous membrane, the free silver forms a compound with the albuminoids and chlorids of the serum forming chlorid of silver and albuminate of silver, hence creating an escar on the surface of the mucous membrane. This coagulation destroys everything contained within the strata, destroying epithelium, pus cells, and gonococci, but this coagulation does not extend to any great depth. Finger has performed experiments verifying the above statements, i. e., allowing a catheter to remain in the urethra of dogs for 48 hours or more, thereby causing a traumatic urethritis, which he treated by the application of nitrate of silver solutions of varying strengths, then excising the urethra and exposing it to the sunlight, causing metallic silver to be deposited. In this manner we can easily see to what depth the drug penetrates. He found that even a five per cent solution did not penetrate the connective tissue, but only the upper and only partly the second epithelial layer.

All antiseptics and antiseptic astringents are further diluted by large quantities of serum the moment they come in contact with the mucous membrane. The result of this is that an antiseptic astringent in the first stages of gonorrhea does not destroy all gonococci. There is always a certain fraction of gonococci left, which in turn multiply and cause new irritation. But the antiseptic astringents and all astringents have a decided astringent effect. Each of these preparations, nitrate of silver, zinc sulphate, potassium permanganate, decrease secretion by causing reflex contraction of the blood-vessels and anemia of the mucous membrane, preventing the extravasation of pus cells and serum. For, if an antiseptic astringent can not destroy all gonococci, and through its astringent action, on the other hand, decreases the inflammatory action of the mucosa, one creates favorable conditions for the propagation of the gonococcus in the tissues. In practice we will frequently find that a patient treated by an astringent will have none or very little secretion while he uses the injection. In the secretion only a very small number of gonococci are found. If injections are stopped for about 36 hours one is surprised at the appearance of the enormous number of gonococci. Hence the astringents form an obstruction to the elimination of the gonococcus from the mucosa, as they prevent the work of the pus cells and serum. Hence, (1) simple astringents contra-indicated in first stage; (2) antiseptic astringents are also contraindicated because their antiseptic action on the gonococci is insufficient, and allowing same arguments as in the case of simple astringents, although not to as great a degree.

Until very recently the Viennese and French schools have coincided in absolutely condemning injections in the first stage, and have had, on that account, some very favorable results. This position has become of late untenable, since the manufacture of a number of preparations which have the virtue of a decided antiseptic action and only slight astringency. The simple antiseptics, which have given satisfaction up to date, are largin and protargol, both of which have great gonococcocidal action. The preparations have another quality, namely, depth of action. These are silver compounds representing soluble silver albuminoids, which cause no coagulation and hence do not shut themselves out from reaching the deeper-lying gonococci. The experiments with these drugs have been very satisfactory, as they have been found to destroy gonococci very rapidly, and to act to a degree on the deep-seated bacteria. Yet experience teaches us that their deep action is not absolutely sufficient as some gonococci in the deeper tissues, especially in the glands, will remain uninfluenced or are not destroyed.

If we had an antiseptic which, if introduced into the urethra, would destroy all gonococci, a few injections would suffice to cure the disease. This does not hold true in the case of protargol and largin. By treating a patient with one of these remedies, the gonococci decrease very rapidly in number, and consequently also the secretions. The gonococci may disappear entirely from the discharge, and the case look so favorable that the patient considers himself cured. At this time there are present only a few shreds bearing an occasional gonococcus. As soon as injections are stopped a relapse takes place, because all gonococci have not been destroyed. Still there is this much in favor of this treatment that most gonococci are destroyed, and the disease does not run so acute a course. There are a few other factors that have to be taken into consideration. Firstly, protargol and largin are not astringents, and hence cause no inflammatory reaction in the urethra, so that injections do not distress the patient any more than the introduction of some neutral or bland solution. Persoli has proven experimentally that gonococci are destroyed after having been in contact with protargol solutions for ten minutes. This may be easily done, as there is no inflammatory reaction, which would be impossible with nitrate of silver, as the burning would be unbearable. Another advantage is that protargol does not cause contraction of the sphincter externus, and in this manner allows the solution to reach the posterior urethra. These are the reasons why injection during the first stage is now universally demanded. Still we must be careful not to take too sanguine a view of the prognosis; although some cases may be definitely cured in about three weeks, the general result will hardly be arrived at before five or six weeks. Having arrived at the second stage, showing in normal cases at the end of the third week a milky secretion and a cessation of pain upon urination and during erection, the gonococci are found growing on the surface of the newly-formed pavement epithelium, so that antiseptics will easily destroy them, still there is danger from relapses, which destroy the pavement epithelium as previously described. Hence it is indicated that we must destroy the gonococci, and at the same time decrease the hyperemia and catarrh, which is possible by the use of antiseptic astringents, nitrate of silver, as we do not endeavor to get depth of action, because the gonococci are found on the surface. Should we see a case of anterior and posterior urethritis of several weeks' standing, we must certainly revert to the administration of simple antiseptics, as we reach the posterior urethra in this manner, and escape the danger of locking up the gonococcus in Littre's glands and the lacunae, but give them a chance to be eliminated by the pus cells. If we lose track of this point we will be surprised by a great number of relapses. The use of balsamics in this disease is of long standing, and although we have no satisfactory explanation for their curative properties, we must allow them to stand as one of the exploits of empiricism in medicine. Upon the administration of sandal-wood oil, the urine becomes clear and the discharge becomes markedly decreased. In case there are any mechanical reasons to make injections impossible or impracticable, we must, for a time at least, depend on this drug. Contra-indications are in tolerance of the gastro-intestinal tract for this medicament.

I will now briefly sketch the treatment of acute anterior urethritis. If a patient consults us and there is no contra-indication (mechanical obstruction) to injections, give injections of a one-quarter per cent solution of protargol, which, in the course of a few days, increase to one-half or one per cent, being influenced in its administration by the absence of burning. In ordering the patient to inject three times daily it is of importance to divide these applications equally during the 24 hours, as otherwise the gonococcus would increase in number during the greater interval. Before injections the urethra must be cleansed by the patient urinating and afterward removing the remaining urine by the injection of a syringe or two of warm water, as otherwise the urine disintegrates the drug. The solution must be injected warm so as to prevent contraction of the sphincter and the ischio-cavernosi and bulbo-cavernosi muscles. Another important point is that a sufficient quantity be injected to balloon out the urethra and come in contact with every part of the mucous membrane, from 2½ to 3 drams being necessary. The syringes in the market are, as a usual thing, too small. The injected fluid must remain in contact with the mucous membrane at least from ten to fifteen minutes for reason above stated. The patient may sit on the edge of a chair, but this is, to say the least, a very fatiguing and uncomfortable procedure, so that he may retain the solution as long as possible, and then inject again, and repeat this until the drug has been in contact for the prescribed length of time. Another point is that it frequently takes from five to ten minutes for the sphincter to relax, and only after that time does the solution reach the posterior urethra. This latter action is certainly necessary if posterior urethritis exists. This treatment is combined with the administration of santal flav. m. 10 tid. In three or four days after the injection of a quarter per cent solution of protargol, secretion ceases, so that it is important to call your patient's attention to the fact that cessation of secretion does not mean a cure of the process, as he would have a recurrence upon neglect of treatment. After the third or fourth day we can quickly increase solution to one per cent, which the patient bears very well. Similar in action to protargol is largin, with the exception of being alkaline in reaction instead of neutral, and for that reason slightly caustic. According to Finger, in acute cases with highly inflammatory symptoms, begin with protargol and eventually switch to largin, because protargol diminishes the acute manifestations and largin has more depth of action and is the more energetic gonococcocide. After a few days of the use of protargol, largin in one-quarter to one per cent solution will act so well that after one week's treatment the acute manifestations disappear, and only a few shreds containing gonococci in small numbers are found in the urine. We must not forget that there are still present in the mucosa gonococci, but we have arrived at the second stage (sub-acute stage), when we alternate with the simple antiseptic, an antiseptic astringent or an astringent, for instance, nitrate of silver solution, one to two or one to four thousand. With this treatment the cases are much more quickly cured and posterior urethritis, which with the old methods takes place in about seventy per cent of cases, is only credited with thirty per cent in this treatment.

2124 Post Street.

THE PLAGUE.

CASES 23, 24 and 25.

By W. H. KELLOGG, M. D., Bacteriologist to the Board.

To the Honorable, The Board of Health, City and County of San Francisco.

Gentlemen: I beg leave to submit the following report on the 23d case of bubonic plague.

Name, Chun Way Lung, male, aged 60, Mongolian, merchant, born in China, married, residence, 720 Jackson Street, died Jan. 6, 1901.

I saw the case on the afternoon of the 7th with Dr. Wilson. The subject was a large, well built, and rather fat man, showing no signs of continued illness. His associate gave a history of illness from gonorrhea for twenty days, a swelling appearing about a week before death. They also said he had been very feverish and thirsty, drinking water all the time, and that he had vomited several times during the last two or three days.

Examination showed a large, flat swelling in the left groin over Poupart's ligament, and extending internally to the middle line over the symphysis. Incision of this swelling did not disclose any lymph nodes, but there was much edema, and the tissues were dark, hemorrhagic and necrotic. A piece of the tissue removed showed the presence in large numbers of the bacillus pestis.

An autopsy was performed the next morning, January 8, at 10 A. M., those present being Drs. White, of the Marine Hospital Service, Kinyoun, Ryfkogel, Norton, and Wilson.

The lungs were found to be normal, heart very flabby and containing dark fluid blood, and about one ounce of dark bloody serum in pericardium. Peritoneum dry. Spleen somewhat enlarged, substance very dark, soft, and pultaceous. Smears from the spleen showed many typical plague bacilli.

Two guinea pigs inoculated with spleen from the case both died in five days of typical plague infection, and the organism has been recovered in pure culture from their organs and blood.

Case 24. Leam Wing Low, age 59, male, Mongolian, laborer, born in China, and has been thirteen years in California. Residence, 833½ Clay Street. Died Jan. 15, 1901, at 6 A. M.

I saw the case on the same day with Dr. Wilson, and removed a portion of gland from a bubo in the right groin, just below Poupart's ligament. The specimen showed microscopically the presence of the plague bacillus. I removed the spleen the next morning and found it to be much enlarged, capsule tense, substance soft, very dark, and trabeculae obliterated. The bloodvessels of the peritoneum covering the intestines were injected. No other glands enlarged. Smears from the spleen showed the plague bacillus in small numbers. Inoculation experiments have verified diagnosis.

Case 25. Angelo Colombo, a native of Switzerland, residence 5 Lafayette Place. This patient was brought into the City and County Hospital by the police patrol on January 14, in an unconscious condition. The following is from the hospital record:—

January 15. Patient well developed, well nourished, face flushed and cyanotic. Lies apathetic, with mouth open. Pupils moderate in size, equal, and react to light. Tongue and lips dry. Vessels of neck pulsate. No dulness over lungs. Thorax well formed. Heart, second space left sternal border, fifth space mammary line. Tones clear. Abdomen not distended or sensitive. Liver extends 15 cm. below margin of ribs, consistency not markedly increased. Spleen reaches posterior axillary line. Patient is able to move both upper and lower extremities; is continually restless, picking at the bedclothes in an unintelligent manner. Temperature when admitted, 97 2-5. Bladder distended, passed per catheter 760 cc. urine, acid, spec. grav. 1.019, no sugar, trace of albumen. Died January 15, 11 A. M. I saw the case at the city morgue at the request of Dr. Leland. He had been opened for autopsy, and I observed that the spleen was much enlarged, rather soft, capsule wrinkled, and having several spots of opaque white thickening of the capsule. The cut surface was dark purple; trabeculae partially obliterated. The entire extent of the peritoneum was covered with a hemorrhagic, sticky, fibrinous exudate, matting together the omentum, intestines, and parietal layer of peritoneum. No fluid. No enlargement of the lymph glands. Smears from the spleen showed the presence of a bipolar staining bacillus, which was morphologically the bacillus of plague. Inoculation experiments have verified diagnosis.

RESULTS OF LIGATION OF ONE URETER.

By Minora E. Kibbe, M. D., Assistant Gynecological Clinic, Cooper Medical College, S. F.

Read before the San Francisco Medico-Chirurgical Society.

Last June an interesting case of complete hysterectomy for cancer of the uterus and parametrium was shown by Professor Landau, in Berlin. The disease had infiltrated to such an extent that he had operated only to prolong life. The right ureter, which was involved so that only a short sound piece remained, was ligated with no attempt at anastomosis or nephrectomy. On the ninth day when I had the pleasure of seeing the patient, she appeared well and happy. A personal letter which I have received from Professor Landau, dated October 26, reports his patient as having made a good recovery. He writes, "She has had no disturbance in the region of the right kidney, the ureter of which was tied," and adds that he will soon publish the case.

In looking over the literature I have found no similar case reported. Cullen (1) gives the notes of autopsy held on a case where the uterus had been removed through the abdomen for carcinoma of the cervix. He says: "Inclusion of the right ureter in a ligature was found. There were remains of a carcinomatous growth in the pelvis. There was endarteritis of the aorta with thrombosis, and, as might have been expected, hydronephrosis on the right side."

Sanger (2) cites a case of vaginal hysterectomy where a ureter was tied and subsequently a uretero-vaginal fistula developed.

Experiments in the animal world have been numerous. Orth (3) says, "Experimentally, animals have lived a long time after ligation of one ureter." According to his "Pathologische Anatomie," "there is, following the ligation of one ureter of the lower animals, a dilation of the tubules, whose epithelium becomes flattened. Later changes occur in the loops of Henle. In the distended capsule one finds granular detritus. Immediately following ligation, pressure of the urine upon the veins of the pelvis of the kidney, brings about a stage of hyperemia, and hemorrhage, particularly under the capsule, and in the connective tissue surrounding the uterus. After two or three days anemia succeeds the hyperemia and ultimately atrophy develops. The pressure of stagnant urine in the ligated ureter and pelvis of the kidney, causes an edema of the organ extending to the capsule and surrounding connective tissue. This edema is due to the reabsorption of the water of the urine by the lymphatics and, of course, disappears when secretion ceases."

Lepine and Porteret (4) found by experiment that the secretion of urine ceases as soon as the counter pressure in the pelvis of the kidney amounts to 50 cm. of water. Less pressure only lessened secretion, the chemical composition varying with reabsorption.

According to Cohnheim (5), pressure in the pelvis of 50 mm. Hg. is necessary to arrest the flow. As the fluid in the tubules is absorbed, their walls approach each other, the canals collapse and become obliterated to a streak, which is with difficulty differentiated from connective tissue. A difference in the resulting hydro-nephrosis is observed, depending on the sudden or gradual hindrance to the flow of urine in the ureter. When the obstruction takes place gradually, the walls of the ureter lose their tone, so that the largest hydronephrotic sacs are those brought on insidiously, or intermittently, giving the stagnant urine time to exercise mechanical dilation of the walls, while with a sudden closure, there is a distension of the kidney and ureter, which very soon disappears. The stout, elastic capsule of the kidney and the reabsorptive function of the lymphatics are forces which contribute largely toward the reduction in size.

Aufrecht (6) found that in rabbits ligation of one ureter was followed by changes in the kidney of the same side, namely, cloudy swelling in the epithelium of the cortex, and after six days, by the appearance of cylinders in the tubules. According to some writers, these cylinders are formed by the sudden stimulus of ligation.

Hanseman (7) found experimentally that following acute closure of the ureter, there is first a dilation of the canals. After three days, mitotic figures are seen in the epithelium of the canals, and the cells increase in numbers. Later, the proliferation of epithelium ceases, the canals become thin, and the epithelium flattens.

Straus (8) experimented on twenty guinea pigs. Of these, five died of peritonitis. After one or two days, the kidney was found large and pale. After four or five weeks, a secondary hydronephrosis set in, and those animals that died four or six months after ligation, showed a high grade of hydro-nephrosis, with atrophy of the kidney and disappearance of the pyramids. Histological examination showed atrophic collapse of the tubules, condensation of the membrana-propria, shrinkage of epithelium, with cystic widening of the Malpighian corpuscles, and thickening of capsule and blood-vessels. As noted by other observers, there was hypertrophy to nearly double its size of the other kidney. The heart of those animals dying after a lapse of from four to six months showed hypertrophy of the left ventricle, without dilatation.

Holste, under Ebstein (9), made a number of like experiments on guinea-pigs, with practically the same results. In one case, after eighty-three days, the sound kidney was more than double normal size, and hyperemic.

Bradford (10) produced atrophy of

the kidney to nearly a quarter normal size by ligating the ureter.

Guyon and Albanon (11), writing on the pathology of hydronephrosis, conclude that after sudden damming up of the urine in the pelvis of the kidney, there is rapid congestion and edema of the organ, with lessened amount of secretion. The kidney epithelium atrophies, and the secretion becomes less and less, and at last ceases entirely. The published experiments on the lower animals prove that ligation of one ureter is not necessarily fatal.

Beverly McMonagle (12) characterizes the procedure as unsurgical. But operations along the same lines in man as on lower animals, should show more favorable results in man, because of the greater difficulties in operating on the smaller animals, and the greater liability to infection.

Cullen (13) says, "Should the ureter be injured high up, and there be no possibility of anastomosing it into the lower half, or into the bladder, nothing remains but to bring it out through the flank, producing a urinary fistula, or to remove the kidney;" but in view of the fact that animals have lived some time after unilateral ligation of the ureter, and that Landau's case recovered, it would appear that a less severe course may remain. Regarding the ligation of the ureter as one of the causes of death, following abdominal hysterectomy, Cullen says: "Under such circumstances the patient may recover; but if she be rather old, the strain of the operation, together with sudden disuse of one kidney, is liable to be followed by death. Should she be able to preserve her forces for two or three weeks, a uretero-vaginal fistula may form, as the urine will instinctively work its way through along the track of the recent operation."

Schatz (14) does not believe the ligation of one ureter necessarily unfavorable, as the other kidney performs increased duty.

Lewellys F. Barker sums up the matter concisely in saying, "Complete closure would, I think, lead to general atrophy of the kidney; the great danger would of course be infection."

In conclusion, two general propositions may be deduced:—

1. Life is possible in man after ligation of one ureter.

2. Given a local disease of the distal portion of the ureter of considerable extent, without infection in it, or the kidney which it drains, and given a sound kidney on the other side, where anastomosis is impossible, simple ligation rather than the severer operation of nephrectomy would seem worthy of consideration.

A reprint of the case published by Prof. Landau has just reached me. He says: "It is now seven months after the operation, and the patient has made a good recovery in spite of the fact that, for three days, she vomited and had a violent headache, and that the urine was lessened to half the amount for two weeks. Up to this time, there have been no symptoms of hydronephrosis. The cystoscopic examination shows the right kidney to be functionless, the orifice of the right ureter appearing on the bladder wall as a small dimple." He cites three operators who have previously carried out this procedure—Bastionelli, Futh, and Phenomenow.

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(1) Cullen, Cancer of the Uterus, p. 249; (2) Sanger, Cancer of the Uterus, p. 270; (3) Orth, Pathologische Anatomie, Vol. 2, p. 135; (4) Lepine and Porteret, Id., Vol. 2, p. 136; (5) Cohnheim, Id.; (6) Aufrecht, E. Die Entstehung Fibrinosen Hamcylinder und der Parenchymatose Entzund Centralblat f. d. Med. Wissenchift, No. 19, p. 219; Virchow Jahresbencht; (7) Hansemann, Deut. Med. Wochensch Bd., 23, p. 239; (8) Straus, J., Des lesions renales dans leur rapport

avec l' hypertrophic cardiac, Virchow Jahresbencht; (9) Holste, A., Ueber Harn, leiterunterbindung, Inaug. dessent, Gottingen; (10) Bradford, Lancet, Vol. 2, p. 1533; (11) Guyon and Albanon, Annale des mal. des organ gen. Urin. Tome 15, p. 1200; (12) MacMonagle, B., Article on Ureters, American Journal Medical Science, December, 1899; (13) Cullen, Cancer of the Uterus, pp. 247, 249; (14) Schatz, Montgomery's Text-book, p. 668; (15) L. Landau, Nierenausschaltung durch Harnleiterunterbindung, Deut. Med. Wochen, 1900, No. 47.

DEMONSTRATION OF PATIENTS TREATED FOR CANCER WITH ARSENICAL PASTE.

By DOUGLASS W. MONTGOMERY, M. D., and HOWARD MORROW, M. D.

Read before the California Academy of Medicine, Jan. 22, 1901.

The following are the histories of several patients suffering from cutaneous epithelioma, treated with arsenical paste, in the medical department of the University of California. In the clinic we had long talked of the advisability of taking up this mode of treatment, especially since the publication of the articles by A. R. Robinson, M. D., of New York, in favor of it, but had procrastinated until urged by Dr. Ernest Pring, who is also of the clinic, to do so.

The histories of the patients shown to-night run as follows:—

Mrs. R., aged sixty-seven, entered the clinic on Aug. 27, 1900, showing an epithelioma on the right temple, one-half an inch behind the right eyebrow. It was of about the size of a five-cent piece, and not ulcerated. The paste was applied for two days in succession; it healed kindly in three weeks, and the remaining scar is hardly perceptible.

Mr. F. M., aged sixty, entered the clinic on Aug. 28, 1900, with an epithelioma of the right cheek, just below the outer canthus, which he said had lasted for ten years. The epithelioma was the size of a dime, ulcerated in the center, and surrounded by a typical waxy border with dilated capillaries crossing over it. He supposed it to have started from the burn of a sulphur match. The paste was applied three times, for twenty-four hours each time; the resulting sore healed in four weeks, and the scar is very small.

Mr. T. B., aged seventy-three, entered the clinic July 6, 1900, for an epithelioma of the nose, which he said had lasted for five years. The lesion was slightly larger than a split bean, was ulcerated in the center, and was surrounded by a hard raised border, covered with dilated capillaries. There were two applications of the paste, of twenty-four hours each. The resulting sore healed uneventfully in four weeks, the scar being hardly noticeable.

Mr. C. F. S. entered the clinic on Aug. 27, 1900, suffering from a rodent ulcer on the right side of the upper lip, over one-half inch in diameter; it had an ulcerated center, and the border was hard, waxy, and infiltrated. There was a great amount of infiltration throughout the right half of the lip. The paste was applied four times for twenty-four hours each time, and the infiltration entirely disappeared, the lesion healing in five weeks, leaving nothing at present but an hypertrophied cicatrix. This was the most difficult case of all to treat, as the position was awkward and the infiltration deep. Two other patients have been treated, and discharged as cured, but we have been unable to trace them.

By far the greater number of medical men, both surgeons and those who give especial attention to cutaneous diseases, believe that epitheliomata of all kinds are best treated by complete excision. A few men differ from this, however, and think that some cancers are best treated with caustics. We ourselves think that all cancers situated at mucocutaneous junctions, or on mucous surfaces, in which there is apt to be early involvement of the lymphatic nodules, are best treated by the excision of the growth itself, and adjacent lymphatic channels and nodules. The small-celled variety of cancers, which are commonly known as superficial epitheliomas, or rodent ulcers, and which are usually situated upon some part of the face, are best treated by methods other than operative. The most effective of the non-operative methods are the actual cautery and the various caustics. The caustics commonly employed are chlorid of zinc, chromic acid, caustic potash, formalin and arsenic. Other methods have been used, such as injections of silver, arsenic, alcohol, aniline dyes, toxins and electrolysis, but the results have not been satisfactory. Treatment by the X ray is uncertain, many cases not healing at all, and in all cases it is very slow. Liquid air has been used experimentally in a few instances; it is more painful than caustics and no better in its results.

The patients we present to-night have been treated by arsenic. The strength of the arsenical paste has a great deal to do with the result. Marsden never used arsenic stronger than two parts of the arsenious acid to one of the diluent, nor weaker than equal parts of the arsenic and diluent. In a great many of the recipes given by writers, the arsenic is used in smaller quantities; in many, in ridiculously small quantities; the paste used by us contains five parts of arsenious acid, three parts of gum arabic, and two parts of cocain. Just before applying, this powder was mixed with enough water to make a thick paste; the amount of water used is of importance, for if not enough is added to the powder the paste will ball, and not apply well, and if too much is added the paste will run. It will be observed that this paste is only as strong as the weakest recommended by Marsden, and it is our opinion that no weaker pastes should be used.

The area to be cauterized was first surrounded with a piece of adhesive plaster; then the paste was applied and covered over with gauze or cotton, held in place with adhesive plaster. This dressing was left on for twenty-four hours. Frequently the dressing was applied for several days in succession until there was a marked gangrenous slough. One objection to this treatment is the slight amount of pain felt after the cocain has lost its effect, and another is the acute inflammatory edema which sometimes closes one or both eyes. The edema quickly subsides, however, after the paste is removed. In many cases the cosmetic results from the arsenic treatment are superior to those following surgical means, and this is an important point with growths on the face. Arsenic certainly seems to have a selective action on the cancer tissue, as we have tried it on two lesions that were not cancer, and where it only caused a trifling reaction. One was a large vascular mole, and the other a chronic localized infiltration from pus infection, and it had no effect on either except to cause slight congestion of the parts.

It seems to us that it is just as necessary to have experience in the use of arsenic, as it is in the use of the knife in the treatment of cancers. One has to know something of the strength of the paste which should be used, the length of time to apply the paste, and the amount of tissue one wishes to destroy. One needs to know what accidents to fear, and one also needs to know what appearances, apparently threatening, may be disregarded. The inflammatory edema, for instance, is very threatening looking, but in reality very innocent. The hole made by the cauterization is also very portentous looking, but it is wonderful what a small scar it leaves on healing. A large amount of bone may be cleaned off and lay bare at the bottom a huge ulcer, and yet the lesion may heal kindly without any necrosis of the bone. Immediately after cauterization, on looking at the horrid disfigurement, one vows never to use arsenic again, but when the result is complete, those vows are forgotten.

PERNICIOUS ANEMIA.

Report of a Case

By E. E. Kelly, M. D.

Blood and Post Mortem Findings by Lois. Nelson, M. D., and Philip King Brown, M. D.

Read before San Francisco Medical Society, December, 1900.

In examining the mortuary statistics of this city for the past year I was unable to find any case of death reported as being due to pernicious anemia. I therefore concluded that the disease is rare here, or else it is not recognized when present. I do not take any credit to myself for recognizing this case, and confess to having diagnosed the case first as typhoid fever.

Mrs. K., aged 25, multiparae, was one of a trio of triplets, all of whom lived to adult age. One of the three still survives; the other died at the age of 18 years from inflammatory rheumatism. When 7 years of age the patient began having severe nasal hemorrhages. Her father also had been subject to bleeding from the nose, but showed no signs of anemia during life. She had frequent hemorrhages up to the age of puberty. She began to menstruate at the age of 15, and from this time the hemorrhages became more severe and more frequent. Her menstruation was also very free, lasting five days. At the age of 16 she had inflammatory rheumatism, which confined her to bed for three months. During this time she had several very severe nasal hemorrhages. At the age of 17 she had a second attack of rheumatism, during which she had hemorrhages so severe that she became blind and deaf, these symptoms lasting 24 to 36 hours. She was married at the age of 18, and became pregnant. During her pregnancy she had severe nasal hemorrhages, but gave birth to a healthy male child, who is still living, and who shows no hemogenetic abnormality. At confinement the patient flowed freely, but not abnormally. Of late years she has suffered several times from uterine hemorrhages at her menstrual epochs. I attended her first May 30, 1900, and found her flowing freely, but the hemorrhage was easily controlled. August 13, 1900, I was again summoned to see the patient, who complained of headache and nose bleeding. I did not think the case serious, and left orders for her to call me again if she needed further attention. August 20, 1900, I was called again, and found her still suffering from headache, pain in the back and limbs, slight bleeding at the nose, a watery diarrhea, a morning temperature 99.2°, evening 101.8°. Upon physical examination I found the tongue coated, pale, and flabby, showing indentations of the teeth along the edges. Slight bronchial cough with some rather coarse rales. Found heart murmurs were heard over both apex and base of the heart; pulse large, easily compressed, 90 beats per minute; abdomen slightly tympanitic, liver and spleen slightly enlarged; marked tenderness over iliac fossae and gurgling upon succession; urine, examination negative, no petechiae. August 30 temperature 104.8° at 8 A. M.; 102° at 10 P. M. Patient complains of great prostration, also is dispnoeic upon slight exertion. For the following week the temperature ranged from 100.2° to 104.6°, without regularity of remission or exacerbation. I discovered that she was taking of her own volition uncertain doses of acetanilid, which she had bought by the ounce and dispensed to herself in sufficient doses to relieve her suffering whenever she felt too feverish or had pain. It was promptly ordered discontinued, which order was not obeyed, as I afterward learned. The temperature remained most of the time above 102° for the next four weeks, but, at the end of this time, showing a tendency to decline. September 27, seventh week of the disease, temperature had fallen to 99.4° at 10 P. M. A day or two later temperature again rose, and she complained of a full feeling in the abdomen. Examination revealed the spleen enlarged much more than formerly, reaching within 2½ inches of the crest of the ilium and nearly to the median line. The liver also was enlarged. Her skin at this time was waxy white, but notwithstanding the long illness emaciation was not excessive. September 29 patient was seen by Doctor Frisbe. The above-named condition of liver and spleen was still present, but tympanites had become so great as to render palpation of these organs more difficult.

A blood examination was made by Dr. Lois Nelson, and the blood changes of pernicious anemia easily disclosed a great diminution of red blood corpuscles with great alterations in their size, shape, and nuclear characteristics, a great increase in the number of white cells with many polynuclear lymphocytes, etc. About August 5 the face, neck, and body became thickly dotted with petechial hemorrhages, which persisted for about ten days. Edema of the feet appeared about this time, and there was frequent complaint of dyspnoeic attacks coming on without exertion. Subsequent blood examinations were made by Doctors Nelson and Brown, which disclosed an increasing leucocytosis suggestive of an acute coincident infection, which proved, upon autopsy, to be streptococcic. On October 13 edema of the lungs appeared with a fatal result.

While this case in its early stages was mistaken for typhoid, it can now be readily seen that it presented most of the characteristic symptoms of pernicious anemia. The onset of the disease is so insidious that in many cases the patient can not tell when it began. In a few cases, appearing during or following a pregnancy or after severe nervous disturbances, its appearance is more abrupt. The victim at first becomes aware of a gradually increasing muscular weakness or other ill feeling, and, as Addison says, "can hardly fix a date to the earliest feelings of that languor, which is shortly to become so extreme. The countenance gets pale, the white of the eyes becomes pearly, the general frame flabby rather than wasted, the pulse large and remarkably soft and occasionally with a slight jerk, especially under the slightest excitement. There is an increasing indisposition to exertion with an uncomfortable feeling of faintness or breathlessness on attempting it. The debility becomes extreme, the mind occasionally wanders, he falls into a prostrate, half-torpid state, and at length most cases have marked gastro-intestinal symptoms, characterized by vomiting excessive quantities of bilious fluid accompanied with little if any nausea, and occurring paroxysmally with intervals of entire disappearance of peristaltic disturbances. The vomiting is not infrequently accompanied with diarrhea, the stool containing urates. The temperature is usually increased, ranging from 103° to 104°, rarely reaching the latter point. Some cases persistently register subnormal temperature."

One such patient I am now treating, whose temperature has not risen above 95° for days at a time. Muller is said to have reported a case, where the temperature declined to 77.6° Fahr. or 28.8° C. before death. Dyspnea is invariably present, appearing on the slightest exertion or after emotional disturbances. Physical examination of the chest is usually negative until a late stage of the disease when edema of the lung and pleural effusion are common. Hypostatic congestion is common, when weakness becomes extreme from the great disinclination to change of position. Pneumonia and bronchitis may occur and hasten if not cause directly the fatal issue. Retinal hemorrhages frequently occur, and deafness and loss of taste and smell have been observed. Albuminuria and renal changes occur in about 20 per cent of all cases. The most characteristic aid to the diagnosis of pernicious anemia is had in the blood examination. Extreme reduction of the number of red cells and great variation in size and shape, and with a relatively high percentage of hemoglobin, an increase in the number of white cells, with the appearance of many polynuclear lymphocytes, are conditions universally present and differentiate this disease from secondary anemias.

Richard C. Cabot, of Boston, in a study of 110 pernicious anemia cases, in the Massachusetts General Hospital, found enlargement of the liver in one-third of the cases; enlargement of the spleen in one-eighth; emaciation in one-half; fever in two-thirds; subnormal temperature in one-fourth; and nephritic symptoms in one-fifth. The characteristic symptoms, which complete the picture of this disease, are its slow and insidious onset; freedom from pain; paroxysmal attacks of vomiting and diarrhea; tendency to remissions, with partial or complete restoration of health by relapse; absence of great emaciation; reduction of red blood cells, with increase of percentage of hemoglobin.

Blood report: Blood flows freely from puncture. Drops look red. Fresh specimen shows no visible fibrin network. Red corpuscles show marked reduction in number, changes in form and size, and moderate pallor. Hemoglobin 30 per cent of normal. Blood counts: red corpuscles 1,635,500 per cubic mm.; white corpuscles 4,600 per cubic mm. Color index 0.9 of 1. Stained specimens: red corpuscles show moderate deformities or poikelocytosis; many macrocytes, fewer microcytes; average size of corpuscles much increased; moderate pallor; some corpuscles mere shadows, others microcytes; stain deeply; marked polychromatophilia. In counting 1,400 white corpuscles are seen, 13 normoblasts and 23 megaloblasts. White corpuscles differential count: polymorphonuclear neutrophiles 82 per cent; small lymphocytes 8 per cent; large lymphocytes 5 per cent; eosinophiles 4 per cent; myelocytes 0.1 per cent. This count shows a relative increase of about twelve per cent of polynuclears, which is not characteristic of pernicious anemia, and is probably due to some complication. Diagnosis, progressive pernicious anemia. A second examination of blood was made October 10, by Dr. P. K. Brown, which showed hemoglobin 42 per cent of normal; red corpuscles 1,300,000 per cubic mm.; white corpuscles 10,500 per cubic mm.; color index 1.6; differential count of white corpuscles; polymorphonuclear neutrophiles 94 per cent; large lymphocytes 2 per cent; small lymphocytes 3 per cent; eosinophiles 1 per cent. This count shows an increase of 12 per cent of polynuclears over the former count due to some other process, here probably a terminal infection. The other features of the stained specimens were about the same as in previous examination.

Post mortem, October 14, 10 hours after death. Rigor mortis absent; body fairly well nourished; skin very pale; scattered diffusely over the body were a number of small subcutaneous hemorrhages; muscles intensely red; each pleural cavity contained about 200 cc. of clear yellow fluid; pleurae smooth. Left lung normal except for a slight peripheral emphysema; right lung similar. Mediastinal glands all slightly enlarged. Pericardium distended, with 250 cc. of clear yellow fluid; parietal layer near the apex showed an old irregular membranous thickening. Heart muscle not especially pale; right side of heart, especially auricle, was distended with small clots and much fluid blood of claret color; valves normal. Left side of the heart: on inner wall of left ventricle was a small, roughened area, and near it a small vegetation, both of these being just below the aortic valve, which is competent and normal. Mitral valve on auricular surface was covered with a row of caluiflower like yellowish vegetations, to which were adherent dark red post-mortem clots. Aorta very narrow, pale, and of normal consistency. Vessels generally contained very fluid blood. Liver, pale yellowish, smooth, firm, and slightly enlarged. Spleen considerably enlarged, slightly softened and friable, dark plum color, except for several anemic infarcts. Pancreas somewhat enlarged, quite hard, otherwise normal. Stomach mucous membrane pale, otherwise apparently normal. Intestines pale, mucous membrane slightly thickened; no other microscopic change. Mesenteric glands everywhere enlarged, but especially so in the region of appendix and on section quite red. Peritoneum normal, except in region of appendix, where it was roughened and granular, evidently from old process. Appendix bent on itself, and beyond the bend the lumen was obliterated; no adhesions. Left kidney slightly enlarged, capsule not adherent, color normal, cortex and medulla of normal proportion, some evidence of parenchymatous degeneration, one small whitish infarct. Right kidney similar. Both adrenals normal. Both ovaries bound down and adherent to broad ligaments. Uterus normal, except for small hemorrhages on its mucous membrane. A section through the upper part of right femur showed bone marrow only slightly reddened. About 30 cm. of spinal cord was removed, which showed no microscopic changes. Culture from spleen showed streptococcus pyogenes. Culture from liver showed streptococcus pyogenes and staphyococcus pyogenes aureus. Cultures from heart and lungs were negative.

Microscopic examination: Section of liver shows extreme passive congestion, slight degree of fatty degeneration, abundant deposit of iron pigment in the hepatic cells, especially in the peripheral zones of the lobules. This iron pigment gives the iron reaction with ferrocyanid of potassium and hydrochloric acid, also with sulphid of ammonium.

Spleen shows passive congestion and some hemorrhage; no deposit of iron seen. Pancreas shows only congestion. Kidneys show high degree of cloudy swelling and much necrosis of epithelium, especially of the convoluted tubules, slight hemorrhage into these tubules; epithelium of Bowman's capsule normal; all the capillaries widely dilated; many casts in the tubules; abundant deposit of iron pigment in the epithelium of convoluted tubules, most marked near the surface of kidney. Sections of upper dorsal part of spinal cord do not show any important changes. Heart muscle shows only very slight fatty degeneration. Blood from marrow of right femur shows, in addition to ordinary blood cells, many eosinophiles, many eosiniphilic myelocysts; many more nucleated red cells were megaloblasts than normoblasts.

HOSPITAL REPORTS.

Gynecological Clinic, Cooper Medical College, Geo. B. Somers, M. D., in charge.

Reported by Minora E. Kibbe.

MUTILOCULAR KYSTOMA OVARII.

Case 2875. Widow, age 69. Complaint, hemorrhage from vagina, which has been fairly constant for nine months and is now increasing. Family history: negative, except that mother died of cancer. Past history: has been a healthy woman all her life. Had ulcers on her body after her second marriage. Menstruation began at twelve; menopause at fifty-five. For nine months has had constant bloody discharge. Leucorrhea has always been more or less constant. Marital history: has been married three times. By the first husband had three children. He died of tuberculosis, in 1853. She married soon after his death. Had four children by the second husband. Had ulcers on different parts of her body after the second marriage. Was divorced in '66; married later; and at 54 years of age was again a widow; her husband having died in an insane asylum. First child was born about ten months after marriage, and last at twenty-nine. Has had no miscarriages, and labors were all normal. Bowels have always been fairly regular till present illness. For eight years has had bleeding from the rectum, which ceased when the hemorrhage from the vagina commenced.

Present illness: About nine months ago she noticed bleeding from the vagina, which has been fairly constant but not great in amount until the last few weeks. Had but little pain, and was unaware of the nature of her trouble, but came to consult about the hemorrhages. Bimanual examination showed the presence of a tumor the size of a child's head, filling the pelvis and reaching half way to the umbilicus. The abdominal wall was very thick, so that the relations of the tumor to the uterus could not be made out. It was solid and symmetrical, and occupied median line. The depth of the uterus was 8 cm.

Clinical Diagnosis: Fibroma based on the irregular hemorrhage and the hardness of the tumor. Operation Nov. 1, 1900. The tumor was found to be ovarian, left side. The surface of the uterus was studded with small fibromata, accounting for the hemorrhages. The right ovary and tube were sound. The tumor had a broad peritoneal pedicle, making it difficult to deliver, but was rapidly removed from the capsule by enucleation. Later the stump was trimmed off and sewed. Nothing was done for the fibromata beyond curetting the uterus. At the woman's age the probabilities were against their increasing, and it was not deemed wise to subject her to the shock of a hysterectomy. Recovery was prompt without pain or fever.

Pathology: The tumor was ovoid; 15 cm. long, 10 cm. broad, and 11.5 cm. thick, and weighed 1 lb. 5 oz. The surface presented a number of small cysts filled with a thin yellowish fluid looking like the surface of a cauliflower. At one or two places small papillary projections were visible, giving the impression that the whole tumor was a papillary growth. On cross section this papillary formation was not apparent, but the numerous cysts gave the tumor the appearance of a sponge. They varied from the size of a millet seed to that of a hen's egg, the largest occupying the central portions of the tumor. They were separated by tough, fibrous trabeculae, and contained a greenish-yellow mucoid fluid resembling pus. Professor Ophuls made a microscopic examination of sections of the tumor with the following report: The tumor consists of numerous small cysts, the walls of which are lined with one row of high cylindrical epithelium. Among the cylindrical cells are many goblet cells. The interior of the cysts is filled with irregular lumps of a highly refractile, somewhat granular substance of the size of the smaller leucocytes. One can find what appear to be transitional forms from lumps of mucus in the goblet cells to these smaller irregular bodies. In spots the cysts show gland-like evaginations. No mitoses found. The thin septa consist of ordinary fibrous tissue. In a few spots the cells show fatty metamorphosis. In some of the irregular lumps of mucus there are small round bodies that stain very intensely and almost homogeneously with nuclear dyes, most likely pyknotic nuclei of desquamated epithelial cells.

Diagnosis: Multilocular kystoma ovarii. This case is one of those strong-back, hard-working, healthy women, whose early puberty, fecundity, and late menopause, show full development and vigor of the pelvic organs. These cases are prone to the development of fibromata and ovarian tumors. If such organs are not bearing children, their vigorous circulation frequently leads to disease. Since the removal of the tumor the patient has been perfectly well.

DIAGNOSIS OF VENTRAL HERNIA.

Case 2677. Woman, aged 41. American. Number of children, 2; miscarriages, 3. Patient always extremely nervous, had three or four operations for pelvic abscess, removal of ovary, and repair of cervix and perineum. Following laparotomy a hernia appeared low down in the cicatrix. The rupture had been borne for five or six years. Sept. 14, 1900, she appeared at the clinic in a depressed, anemic condition, and suffering more or less pain in the abdomen; was advised to have the hernia cured. Operation October 17. The old abdominal cicatrix was excised. The extent of the wound was very much greater than was anticipated, and when the fascia was brought together for suturing there seemed to be barely enough for uniting. The edges were sewed by mattress stitches, using rather strong silk. The adipose and skin were sewed in layers, using catgut. When finished the abdomen appeared tightly drawn. Recovery, however, was not interrupted, and an examination Jan. 8, 1901, shows the tissues firm, and general condition much improved.

HYSTERIA.

Case 2866. Woman, married 8 years; aged 27. Mother an Italian and epileptic. Menstruation began at 14; regular; lasts four days, with some pain before and during the flow, also with heavy feeling in back, and pain in breasts. Five years ago had a miscarriage, but not pregnant since. Present complaint great nervousness; ball frequently rises in throat and chokes her; muscles of neck stiffen during and after the period. Cries for hours at a time. Bimanual examination showed prolapse of both ovaries, with left one cystic. Uterus retroverted. Treatment: At first palliative. Glycerin and boric acid tampons packed in vagina behind cervix, with patient in knee-chest position. Teaspoonful ammonium valerianate every four hours during day. Patient did not improve much, so dilation and curettement proposed with rest in bed for three weeks. This was carried out November 22. While under the anesthetic the ovaries were lifted as high as possible by bimanual manipulation, and the uterus brought forward and held in position by packing vagina with iodoform gauze. At present, six weeks after operation, patient expresses herself as greatly benefited. Does not cry; is able to do her housework without tiring, and is rarely troubled with the globus hystericus. Remarks: The nervous temperament is probably hereditary from mother. The chief elements in the treatment were rest in bed with regulation of diet and bowels, and perhaps the lifting up of the ovaries.

FOR SALE.—One Chadwick Gynecological Examining-table, Manufactered by Codman & Shurtleff. Complete with folding hair-cushion, glass-stoppered medical bottles, etc., black walnut. Price at factory, $75. Can be had for $40. Address, X Y Z, this office.

Occidental Medical Times

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THE GOVERNOR'S MESSAGE AND THE PLAGUE.

In his recent message to the Legislature of the state of California, his Excellency Henry T. Gage has seen fit to add another disgraceful chapter to the question of the existence of plague in San Francisco. This message is burdened with a verbose and untruthful attack against the presence of the disease, and especially against Dr. J. J. Kinyoun, the Federal Quarantine Officer. These charges have been proven to be false so often in our pages that we will deal with them as briefly as possible. That which should appeal most to the honor of the profession reads as follows:—

> "Theretofore cultures and slides containing genuine plague bacilli were imported into the state, and such cultures and slides were carried by certain physicians and others in their pockets while riding in cars and stopping at hotels and other public places. Could it have been possible that some dead body of a Chinaman had innocently or otherwise received a post-mortem inoculation in a lymphatic region by some one possessing the imported plague bacilli, and that honest people were thereby deluded?"

These charges are false and absurd. That cultures and slides were in the possession of certain bacteriologists, for scientific study only, is true; but that they were imported or used for purposes of fraud, deception, or criminal infection of bodies is false, and his Excellency is unable to produce any proof in support of his assertion. As far as we can learn, after very careful inquiry, the only cultures of genuine plague bacilli existing in the state were in the possession of Drs. Kinyoun and Ryfkogel. The former's had been sent to the Marine Hospital officer from Bombay, and the latter's came from some eastern laboratory. We stand ready to prove that the culture in the hands of Dr. Kinyoun was absolutely inert and non-virulent to animals; that this culture remained sealed in the laboratory at the Quarantine Station from the time of its receipt until March 11, and after the post-mortem and diagnosis of the case of March 6 had been made and verified by Drs. Kinyoun, Kellogg, Ryfkogel, and Ophuls; that this particular culture was opened in the presence of Dr. Agnes Walker, by Dr. Kinyoun, at the laboratory, for the purpose of comparison with the cultures of the bacilli found in the glands of Wing Chung Ging, the case on which the governor has based his indictment; that a portion of this same culture was afterward given to Drs. Kellogg and Ryfkogel for the purposes of comparison; that the virulence of this culture was tested on animals by Drs. Kinyoun and Ryfkogel, and that it was found to be absolutely non-virulent and inert.

Again we stand ready to prove that the autopsy on this body was attended only by Drs. F. P. Wilson and Kellogg; that an examination of the gland was first made by Dr. Kellogg, with the result that he found the plague bacillus, and for verification gave a portion of the gland to Drs. Kinyoun, Ryfkogel, and Ophuls; that at this time Dr. Kellogg did not know that any cultures of plague bacilli were in the state; that Dr. Ophuls made his diagnosis independently of the others; and finally that the bacillus isolated from these glands was pathogenic to animals. So much for the cultures.

The inference that it could "have been possible that some dead body of a Chinaman had innocently or otherwise received a post-mortem inoculation in a lymphatic region by some one possessing the imported plague bacilli" needs some comment. We have shown that the only cultures in the hands of Dr. Kinyoun were not opened until March 11; that Dr. Kellogg had none in his possession until this date or later; that Drs. Ryfkogel and Kinyoun did not attend this post-mortem, hence none of these physicians could have given this injection. To be more specific, the governor's own charges and arguments should be satisfactory evidence that it is impossible for the only physicians who possessed cultures of the genuine bacillus to "innocently" inject this body with a portion of these cultures, as their sole aim and effort, according to him, has been to injure the state or to secure money from the municipality of San Francisco. If "otherwise," that is, for criminal purposes, they surely would have used healthy, vigorous germs on the glands, as they never saw the body, to save themselves, if possible, from the absurd and ridiculous position into which his Excellency has fallen. Now, the bacillus that should have been obtained from this Chinaman's body, if injections of these cultures were used "innocently or otherwise," must be inert and non-virulent; whereas, the bacillus obtained has been proven by expert bacteriologists all over the United States to be pathogenic to animals, and has proven by its own record in 25 cases most virulent to man. Moreover, it is impossible to inject virulent, much less dead bacilli into a dead body or into a gland that has been removed, and secure therefrom the characteristic changes in the clinical, microscopical, and pathological picture presented by the reported cases. It is ignorantly absurd to suppose that the bacilli would grow and spread through the body. The bacillus, virulent or innocuous, if found, would appear only at the point of injection or injections, there would be no infiltration of the tissues, it would not be scattered through the substance of the gland or glands, and there would be none in the spleen, blood, serous cavities, heart, etc. Therefore, the absurdity and falsity of these statements is most apparent, and the charge is a serious one. It attacks the honor of the profession here and elsewhere; of our local and state Board of Health; of Dr. J. J. Kinyoun; of the Marine Hospital Service; and of the United States Government. If allowed to stand unchallenged, it will destroy all influence and power of medical opinion in California, and render similar evidence of the existence of disease null and void. It was not based upon facts, and in all probability was instigated by a man, now high in the governor's favor, who charged Dr. Kinyoun in person with the same crime, but who was shrewd and cautious enough to promptly retract it. When the governor's evidence for such a charge is considered; when we realize that this document is given forth as the honest and truthful conclusion of the people of the state of California, and when we believe to our utter disgust that this part of the paper was at least suggested by a practitioner of medicine, his presupposed integrity and ability become a matter of gravest doubt.

With regard to his report of June 13, to Secretary Hay, we refer our readers to the July number of the "Times" for 1900, and desire to add that the absolute falsity of these resolutions has been rendered more complete and humiliating to his Excellency by subsequent and current events.

His quotation with reference to the decision of Judge Morrow has met the same fate. Again we must refer our readers to the July number of the "Times," and add that in November, 1900, in an interview with a committee of the San Francisco Board of Health, Judge Morrow gave full assurance that he would render the board all the aid possible in quarantining Chinatown and in establishing a detention hospital for suspects. He readily assured them of his good will and assistance, thus entirely denying the position taken by him in July.

The governor's reference to the fact that other states and countries have quarantined against us is not complete. This quarantine is not unjust; it is a protection that our people neither offer themselves nor desire to grant to others. If the governor would quarantine infected houses or districts, acknowledge the truth, Colorado, Louisiana, Texas, British Columbia, Mexico, the Hawaiian Islands, etc., would not do in their own behalf what is plainly the duty of the governor of the state of California.

The section dealing with the importation of plague bacilli is eminently farcical, especially in face of the fact that cases are constantly recurring, and that the only bacilli of bubonic plague existing in the state of California previous to the outbreak of the disease, were absolutely harmless.

His proposition to extend the powers of the State Board of Health no doubt would aid the autocratic policy so ignominiously imposed on the present board; but we can not see the utility of this increase of power or of any law to protect the state from such a disease, if his Excellency is so positively certain that none has ever existed.

The proposed legislation against false reports of the existence of bubonic plague is most urgent and sadly needed. It would soon give his supporters a well-deserved rest in quarters proposed for others.

Altogether this message is a most remarkable and unique document, a sorrowful polemic, because of its falseness and its unfounded animosity against the Federal Quarantine Officer, Dr. Kinyoun, in whose behalf, and in contrast to the knowledge and experience of the governor and his allies, we quote the following from the *Evening Bee*, of Sacramento:—

"The spread of bubonic plague in the world in the past few years early awoke Surgeon-General Wyman to the importance of taking precautions to prevent its introduction into this country. Early in the present year he published a pamphlet upon the plague, treating of its history, symptoms, various forms, progress, and treatment, which stands as the best work extant on the subject. He sent Dr. Kinyoun to Europe especially to study the plague and its treatment, selecting him for his ability and especial fitness for this line of investigation. Dr. Kinyoun worked in the world-famous laboratories of Vienna, Berlin, and Paris. He has worked with Kitasato, the discoverer of the plague bacillus; with Koch, the discoverer of the tubercle bacillus; with Behring, the discoverer of the diphtheria bacillus; with Pasteur, probably the most renowned bacteriologist in the world during his life; with Roux, the successor of Pasteur, in charge of the Pasteur Institute, and the discoverer of the antitoxin for diphtheria; with George Nuttall, the California boy who developed the antitoxin theory; with Welch, of Johns Hopkins University, and with Sternberg, Surgeon-General of the United States Army.

"These men have personal knowledge of his ability as a scientist and surgeon, and his integrity as a man, and with them his conclusion relative to a suspected case of bubonic plague would outweigh the attacks of all the legislative resolutions, all the commercial bodies, all the newspapers, and all the executive venom that can be crowded under the straining head-piece of Henry T. Gage. With the vast increase of commerce with Asiatic nations incident upon the expanding policy of the Federal Government, Surgeon-General Wyman recognized San Francisco as the post of greatest danger, and dispatched there as Federal Quarantine Officer Dr. Kinyoun, the best authority in the country upon bubonic plague and the man best fitted to cope with the situation.

"To a man in Dr. Kinyoun's position there could be only one object in view, and that the protection of the country from possible plague invasion. He had here no political or other interests, and he certainly could gain nothing by attempting to injure the state, as claimed by Governor Gage and the San Francisco newspapers. Granting for the sake of argument that the San Francisco Board of Health, as has been charged, desired to arouse a plague scare for the purpose of securing more money to spend and more political patronage, this certainly could not apply to Dr. Kinyoun. Those who have attacked him have failed to show a single instance where he could possibly gain anything by the distribution of reports of plague, false or otherwise, whereas he could suffer personal injury only by failing to report plague when it did exist or by reporting plague when it did not exist.

"There was, in other words, every possible reason in the world why Dr. Kinyoun should first be absolutely sure of his diagnosis and promptly report the result of that diagnosis to Surgeon-General Wyman at Washington. The common-sense view must be that a man of Dr. Kinyoun's reputation in his position would have only the interest of the health of the nation at heart, and the health of the nation considered from the United States Quarantine Station at Angel Island means, first of all, the protection of the health of California."

Subservient to the will of the governor, the state Senate, by a large vote, has forwarded to Washington a demand that Dr. Kinyoun be removed. They base their request on his Excellency's statement that the disease does not exist. These people should realize that the brains of the earth are not concentrated in the Legislature of California or under the broad brim of their chief executive. They should not forget that those to whom they appeal will consider only the truth and equity of the question, and are in no way spellbound by the idiotic loquaciousness of their master, or are coerced by the demands of the politics of this commonwealth. These obedient satellites should halt long enough, before the hanging,* to discover that the United States Government has informed the world that plague exists in California, and that this government will not retract its statements without an exhaustive and honest investigation. For this reason, a commission consisting of Drs. S. Flexner, of Penn; F. A. Novy, of Mich; and Lewellys F. Baker, of Illinois, are in San Francisco, carrying out an investigation. Drs. Flexner and Barker have only recently returned from the Philippines, Calcutta, Bombay, etc., where they went as special agents of the government for the study of the plague. They are men whose knowledge and integrity are beyond impeachment by the chief executive or the newspapers of this state, and we trust that their verdict will settle for all times the most disgraceful, most pitiable, and humiliating chapter in the medico-political history of California.

ERRATA.

We desire to make the following corrections in Dr. Pratt's paper, published in the "Times" for January. On page 22 we state "that in 24 cases not operated upon the fatality was 68.8 per cent; in 265 cases the fatality was 63.1 per cent; in 515 cases operated upon the death rate was 23.3 per cent. In other words, the ratio of fatality in non-operative cases was almost 1 to 3." We should have stated that the ratio of fatality in operative cases as compared to fatality in non-operative cases was almost as 1 to 3.

SOCIETY PROCEEDINGS.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, December 11, 1900.

President G. H. Evans in the chair.

GONORRHEA.

Dr. Martin Krotoszyner read a paper, "Notes and Observations on Some Rare Complications of Gonorrhea."

Dr. D. W. Montgomery: "On March 28,

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* "And he (Dr. Kinyoun) should have been hanged for it."—Cutter.

1900, Dr. Krotoszyner sent me the patient referred to in his paper. The man, twenty-one years of age, a cook (broiler) by occupation, had had typhoid fever seven years ago. He had come to California five years previously on account of a cough and slight pulmonary hemorrhage. On his arrival a doctor, whom he had consulted in Los Angeles, told him that an eruption on the left fore-arm was eczema. He denied ever having suffered from syphilis. He said that his parents were both healthy. I could not elicit any history of either eczema or psoriasis in the family. As Dr. Krotoszyner has told you, he was suffering at the time from gonorrhea, but his general health was good. He told me that the affection of the nails began six or eight months previously, in that of the left middle finger. There was a great deal of pain, and the whole finger-tip was reddened; but there was no redness at the base of the nail. The nail of the left index was next affected. At the start this was painful, and the finger-tip was reddened. The subsequently-affected fingers were neither red nor painful. The left thumb nail was the only one which fell off entirely. The toe-nails were not affected. There was no numbness or anesthesia, or other nervous symptoms, nor was he troubled with cold hands or feet. The skin was in all other situations in good condition, white and normal. There were no symptoms whatever of psoriasis, and, as previously mentioned, the patient had never suffered from syphilis. The hair and teeth were good. When I saw him the nails of the left ring, middle, index, and the right thumb were affected; the affected nails were white and broken, with uneven free edges. The nails had lifted under their free edge, and the process had worked backward, separating the nail from its nail-bed. There was no advancing red border such as is seen in psoriasis, indicating the advancing age of the disease. As Dr. Krotoszyner has said, I did not know what to attribute the disease to. There was no history of syphilis, there was no evidence of disease of the nerves, and there was no sufficient evidence of psoriasis. If this nail affection is to be attributed to gonorrhea, then it differs from the gonorrheal nail affections described by Vidal, Jeanselme, and Stanislowsky, in there not being at the same time a corneous dematitis."

Dr. Krotoszyner: "The history of this interesting case of nail affection is not complete without Dr. Montgomery's notes. At first I did not consider the nail disease in any way connected with the patient's gonorrhea, and therefore did not pay any attention to it until I found reports of similar cases in the most recent literature. The nail disease certainly abated simultaneously with the gonorrheal infection, and, therefore, I did not hesitate to connect one with the other. I do not think that the patient ever had psoriasis, and this nail disease certainly did not appear as a psoriasis unguium. It disappeared without any treatment; it appeared after the patient had acquired a severe gonorrhea, and gradually improved with it. I think we will have to pay more attention to the complications of gonorrhea on account of their frequency and their tenacity. There is hardly a malady as refractory to treatment as gonorrheal rheumatism. I have seen half a dozen cases during the last year, and I confess myself fortunate to see a sufferer from this gonorrheal complication leave his bed after three or even more months."

CARCINOMA OF STOMACH.

Dr. S. I. Harrison exhibited a pathological specimen, with the following remarks: "The specimen which I present is carcinoma of the stomach. It was removed from a man about fifty years of age, on the 22d of September last. This man came from Nevada, where he had been treated for about three years for gastric catarrh, as his case was diagnosed by several physicians. On presenting himself for the first time, a few days before operation, I found the stomach considerably distended with gas, and easily outlined through the abdominal parietes. He also complained of constant nausea and frequent vomiting. He vomited up considerable mucus but no blood, and constantly discharged large quantities of mucus from the bowels. He stated that certain elements of diet could not be taken because they caused intense burning in the stomach. He was obliged to abandon the drinking of alcoholic liquors, which he had used more or less all his life. In order to empty his stomach of gas and prepare him for a more perfect examination, I gave him a brisk cathartic consisting of calomel, soda, etc., which did the work very satisfactorily; for when he presented himself the next day for further examination, the stomach was empty, and I was able to outline without any difficulty an enlargement, which was in the region of the outer margin of the left rectus muscle and seemed to be connected with some of the abdominal viscera. This neoplasm was readily movable; could be shoved up under the ribs or brought down almost to the umbilicus, but always remaining on the left side. My diagnosis was a neoplasm of the greater curvature of the stomach, and well to the left of that organ, of probably a malignant nature. Dr. E. E. Kelly was called in, and, after a thorough examination, confirmed my diagnosis. We decided to operate. An incision was made through the left rectus muscle towards the outer margin, where we expected to come directly down on the tumor, but were not a little surprised to find this carcinoma; and instead of being local to the left of the stomach in its greater curvature, it was, in fact, near the pylorus, and had involved quite a large area. Clamps protected by rubber were used both on the duodenum and stomach. A resection of the duodenum was made, and in order to keep sufficiently far from the invaded territory it was necessary to remove about two-fifths of the stomach, including the pylorus. The incision in the stomach was entirely closed by three rows of catgut sutures; the first consisted of a suture in the mucous membrane, principally for hemostatic effect. After this an end-to-end anastomosis was made between the duodenum and the posterior wall of the stomach by means of a Murphy button, and fortified by catgut sutures. He stood the operation well, and rallied quickly from its effects. He suffered a good deal the first night from intestinal flatus, but this was quickly relieved by the old-fashioned remedy, turpentine stupes and enema. Occasional hypodermics of strychnin, gr. $\frac{1}{30}$, given when his condition indicated its necessity. His recovery was uneventful. Diet in this class of cases is an all-important element in treatment, since neither food nor drink can be taken by the stomach for some days. This difficulty was to some extent overcome by regular administrations of nutrient enemata of various kinds of neutral saline solution. On the fifth day we began feeding by stomach. ʒi of malted milk was ordered to be given every two hours for the first twenty-four, then ʒii every two hours for twenty-four, then ʒiii, etc., increasing ʒi each day till the tenth day after operation. Malted milk was not always given. This was varied with other concentrative liquid foods. After the tenth day the diet was of semi-solid consistency. At the end of two weeks he was allowed to sit up, and at the end of three weeks he left the hospital. As to the button, he has never to our knowledge passed it, although careful search was made in each discharge."

Dr. F. B. Carpenter: "In response to Dr. Cheney's question, I would like to say that it makes no difference to the operator so long as it is in the stomach; the technique is practically the same. In reference to this operation it may be of interest to state that I did a similar operation eighteen months ago. The patient is now in good health, weighing forty pounds more, is perfectly well, and attending to his duties, although we removed at that time two-thirds of his stomach. He takes no more care of his stomach than I do. The case of Dr. Harrison's has proven a very interesting one. The feature about this operation which seems to commend itself is the ease and facility with which it is done, and I believe it should assume a high position in a radical surgery. It is certainly preferable to any of the methods of gastro-enterostomy when the growth can be removed without sacrificing the life of the patient in so doing."

Dr. T. W. Huntington: "The statement that it makes no difference what part of the stomach the tumor occupies, ought not to pass unchallenged. It would seem that the matter of location of the tumor is one of extreme importance. As a rule, malignant growths at or in close proximity to the cardiac orifice are practically inoperable. It is most important in these cases to reach a diagnosis at the earliest possible moment. But Hemmeter, in a paper read before the last meeting of the American Surgical Association, states positively that thus far we have no means of determining definitely the existence of gastric cancer until such time as the growth makes itself manifest by the presence of a tumor. If this be true, operative treatment of this disease will continue to be more than disappointing."

Dr. Harrison: "With reference to Dr. Huntington's remarks, that the location of the disease in the stomach might make it in certain cases undesirable to operate at all, and that he did not think that a complete gastrectomy could be or ever had been performed, Dr. Carpenter has voiced my sentiments. I think my statement about the location of the tumor was misunderstood, for I do not wish to leave the impression that I thought it involved the cardiac orifice of the stomach, for it did not. Its location, I said, was diagnosed as being in the greater curvature of the stomach well up towards the cardiac orifice."

Regular Meeting, Jan. 8, 1901.

President G. H. Evans in the chair.

SEPARATION OF END OF HUMERUS AT EPIPHYSIS.

Dr. T. W. Huntington presented a case of complete separation of the lower end of the humerus at epiphyseal junction, illustrated by radiograph. The latter showed the entire epiphysis separated from the shaft. The injury occurred in a child of seven years, through indirect violence. The apposition of fragments was nearly perfect, as shown by the alignment and integrity of function. By many of the earlier authorities this injury was regarded as extremely rare, but the radiograph process has rendered diagnosis more accurate, and of late these cases are being reported with tolerable frequency.

GASTRO-ENTEROSTOMY.

Dr. T. W. Huntington exhibited a specimen showing an effort at gastro-enterostomy for carcinoma of the stomach, with the following remarks: "The patient was a man aged 74 years; he had suffered from pronounced symptoms of gastric cancer for several months. For several weeks there had been frequent vomiting, and during the days before the operation scarcely any food had been retained. Urinary analysis showed a small amount of albumen present. Although the condition was grave, an effort to reestablish the intestinal tract was considered advisable. Simple gastro-enterostomy between the posterior wall of the stomach and the lower portion of the duodenum was accomplished rapidly by means of a Murphy button. The patient went on fairly well for thirty-six hours, then in spite of every effort to meet the exigencies of the case the kidneys ceased to perform their function, and the patient died at the expiration of seventy-eight hours. The specimen shows the button. In front where the anastomosis was reinforced by Lembert sutures of silk all the coats of the bowel were in perfect apposition. Posteriorly the peritoneal surface showed slight separation, but the remaining surfaces were perfectly united. The abdominal cavity showed no evidences of infection."

PROTARGOL IN GONORRHEA.

Dr. A. B. Grosse read a paper, "Indications for the Use of Protargol in Gonorrhea."

Dr. J. C. Spencer: "I thoroughly concur with Dr. Grosse as regards the effects of protargol, and will only comment to this extent: He emphasizes the necessity of repeated injections of protargol solution for the purpose of overcoming the resistance of the compressor urethrae muscle, thus causing the injected fluid to pass backward into the deep urethra. My personal experience has been that injections in acute types of posterior urethritis are not a proper or rational method of treatment. If he has good results from the treatment of posterior urethritis, getting the solution in by such means, I would like to have it corroborated. It has been my experience that the use of a syringe, containing enough fluid to balloon the urethra, is prone to produce a spasmodic action of the compressor urethrae muscle. If the posterior urethra has not been involved in the gonorrheal process, this solution may produce a slight irritation. This may be only a stepping-stone to the extension of the gonorrheal process into the deep urethra. It is perfectly proper to distend the anterior urethra; the capacity of each patient up to a certain must be found. Try to give them enough fluid in the urethra to distend it sufficiently, yet not enough to cause any spasmodic contraction."

Dr. M. Krotoszyner: "I must express my satisfaction that the subject of gonorrhea is treated here in the society more often than heretofore. I am very grateful to Dr. Grosse for having given us such a brief but complete resume on the pathology of acute gonorrhea. It never has been brought to my attention so perfectly as to-night. As regards the action of protargol in the treatment of acute gonorrhea, I can not agree with Dr. Grosse. I have experimented with this drug for a number of years, and can not say that my acute cases are getting on any quicker with the use of the drug than before. The same is true of largin, which contains a still higher per cent of silver than protargol. Dr. Grosse stated that protargol does not irritate. I have at present a case under observation from which it would appear that it does irritate. A young medical student suffering from acute gonorrhea had been treated by another student with a three per cent solution of protargol injected in 24 to 48 hours. When I saw him he had symptoms of an acute periurethritis and cystitis. The following day he suffered from pains in all of his joints; his temperature was above 100° Fahr. I have seen repeatedly that injections of protargol above two per cent, in some cases above one per cent, are very irritating. To illustrate this, I wish to briefly relate the case of a gentleman of fifty years, suffering from acute urethritis, who was treated at first with a one-half per cent solution of protargol, gradually being increased to one per cent. I had to desist from injecting a stronger solution of the drug because he simply could not stand more than one-half per cent. These illustrations show that Dr. Grosse's statements as regards the non-irritating properties of protargol are not always corroborated by experience. I must say that I have had the best results in acute gonorrhea with a drug that has not well established antiseptic qualities, but seems to possess good gonorrheal properties; this is the sulphate of thallin. My attention was called to this drug by an article from Casper, and I must say that of all the drugs that I have used, this one gives me the best satisfaction. As far as the practical side of Dr. Grosse's remarks is concerned, I think that all our antiseptic remedies and the modern treatment of acute gonorrhea have not been instrumental in shortening the disease materially. Those patients who can keep quiet and observe a proper regime, naturally get better after a time, while the ambulatory treatment of acute gonorrhea, even with our modern methods and antiseptic remedies, will drag almost as many cases into the acute and chronic state as heretofore."

Dr. A. B. Grosse: "In reply to Dr. Spencer I would state that I have been speaking practically of the anterior urethritis. I believe it is the general custom to consider an acute posterior urethritis a 'noli me tangere.' There is no danger of some of the injected fluid reaching the posterior urethra, and there causing irritation, as the solution is both antiseptic and non-irritant. For this reason the objection to the injection of large amounts of solution into the urethra is untenable. Indeed, according to facts mentioned in this paper, cocci can be destroyed only by coming into direct contact with the solution, and to accomplish this we must bulge out the folds of the urethra, injecting as much as it will conveniently hold. Protargol, as I have stated, is only relatively unirritating, but if you follow in the rule of beginning with one-quarter per cent solution and gradually increase, you will not have any trouble. As to Dr. Krotoszyner telling us of a medical student using a three per cent solution and then consulting him for a cystitis, I can not say if the indications mentioned in this paper were present. At any rate he used too strong a solution, one per cent being considered the maximum. Dr. Krotoszyner says his results with protargol are no better than with other drugs. The reason for this is that most cases consult us too late, so that protargol is not indicated. Allow me to again briefly outline its indications, which, if strictly followed, can not be objected to; that is, during the first stage of acute anterior urethritis, when the gonococci are deep-seated, and the discharge contains pus cells loaded with gonococci and an occasional pavement cell from the fossa navicularis. This stage is characterized by copious greenish discharge with pain resulting on erection and burning on urination. The superiority of this treatment is in the fact that it cuts short decidedly the first stage of the disease."

Dr. F. B. Eaton: "It surprises me that nothing has been said directly about the drug itself. Protargol has, perhaps, had more varied results in different hands than any modern drug. I have made some experiments lately as to its qualities, with Dr. Geo. Ebright of this city, and they show that protargol deteriorates when in watery solution with extreme rapidity on exposure to light. This we found to be the case with solutions of ten per cent and twenty per cent in distilled water. What, then, must be the power of one-quarter per cent? I would ask Dr. Grosse to explain the difference of the effects in different hands under similar circumstances. I would also ask how it is that in opthalmic practice we use fifty per cent solution, and do not get uniform results until we do? Of course, the conjunctiva has a different structure from the mucous membrane of the urethra. Dr. Ebright's experiments with cultures of typhoid bacteria show that even a fifty per cent solution has only a slow effect on such germs."

Dr. Grosse: "Replying to Dr. Eaton, I agree with him in that a practically fresh or recent solution is advisable. I am not certain whether protargol destroys all other bacteria, but can certainly state that from the results of my own experiments, as those of others, a quarter per cent solution remaining in contact with gonococci for ten minutes destroys them. Concerning the statement that oculists in the United States use fifty per cent solutions in the conjunctival sac, I must say that it is news to me; still I can not see where it can do any harm; but in Berlin, Breslau, and Vienna, if I remember correctly, a five per cent solution is considered the maximum."

VACCINATION.

The following, presented to the society by Dr. Dorr, duly moved and seconded, was unanimously adopted:—

Whereas, smallpox and other epidemics more or less severe are constantly being noted in the newspapers and medical journals all over the world, and it being a fact, from observation and our reading, that the great benefits of vaccination are grossly neglected by our profession, thereby rendering epidemics of smallpox not only liable, but in the not remote future entirely probable; be it

Resolved, that it is our duty to call the attention of the medical profession in general to the urgent necessity of the immediate vaccination of all persons never vaccinated; and,

Whereas, we have no virus-producing herds on this coast, and it is very difficult to keep active vaccine virus sent to us from the eastern states, during the summer months, be it

Resolved, that it is the duty of all physicians to impress the community in general of the great advisability of being vaccinated before June 1, 1901; and be it further

Resolved, that a copy of these resolutions be sent to the medical profession of San Francisco, to our newspapers, to the instructors in our school department, and to all medical societies in California.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, December 3, 1900.

Dr. Ellinwood in the chair.

ONE-SIDED LIGATION OF THE URETER.

Dr. M. E. Kibbe read a paper entitled "Results of Ligation of One Ureter." (See page 46.)

Dr. G. B. Somers.

Cases of obstruction to the ureter are rather common. Kelly mentions twenty-two separate causes that may produce obstruction. The point of interest about obstruction as treated by Doctor Kibbe, is whether ligation is a legitimate procedure, where the ureter can not be disposed of by nephrectomy, or by transplantation. Nephrectomy is a serious operation, and where the conditions are unfavorable, it is sometimes advisable to seek some other means of relieving the obstruction. Attempts have been made to transplant the ureter into the bowel, but owing to the infection and suppuration that have universally followed, such methods have been abandoned. My own feeling is that in the case of Professor Landau, given as it is without detail, it is possible that the kidney was in such a condition that the ligature did not amount to any obstruction. Where we get sudden obstruction from a stone, the symptoms are pain in the back, vomiting, and collapse. These appear alarming, and the attendant is liable to resort to surgical measures much too soon. If the ureter is obstructed, the disposition of it should depend upon the condition of the kidney. If there is hydronephrosis with some atrophy of the kidney, and complete or almost complete loss of function, ligation might be employed. But if the function of the kidney has not been interfered with, there being evidence of obstruction only, it seems unsurgical and dangerous to ligate as an elective procedure. There is no doubt but in the large number of cases of vaginal hysterectomy recorded, the ureter has accidentally been tied or cut in some way, and so far as is known no serious results have followed.

Dr. S. Stillman.

On the whole I agree with Doctor Somers. I know that ligation of the ureter or sudden obstruction from stone or twisting are liable to be followed by profound uremia. Why this should be is not known, and under such conditions it may become necessary to remove the kidney to preserve life. Where the other kidney is in good condition, such procedure is attended by little danger. On the other hand, where the ureter is accidentally cut in hysterectomy, or where the shock from an operation for nephrectomy would be great, ligation of the ureter is preferable.

SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE, AND THROAT SURGEONS.

Regular Meeting November 15, 1900.

Dr. Henry L. Wagner, president, in the chair.

ZONULAR CATARACT—RICKETS.

Dr. F. B. Eaton presented a girl aged 16, with zonular cataracts, who had had for some time headaches along with progressive loss of vision, which, however, had always been defective. She also complained of headaches, but her health is otherwise good. As an infant her mother states that the patient, with the other children, had been considered rickety by a physician. Examination shows beautiful and typical zonular cataracts centered in the upper and inner portions of each pupil, and occupying the whole of the left undilated pupil. The ophthalmoscope shows nothing abnormal in either fundus save blanket-red hyperemia. The teeth have the appearance generally held to be peculiar to rickets. Doctor Eaton thought their appearance of seaminess transversely not necessarily indicative of rickets, and he could not exclude at this time syphilis. It is necessary, also, to be on one's guard against the possible coexistence of diabetes. He had not yet had an opportunity to test the urine. He had tentatively ordered the iodid.

Dr. G. P. Pond asked Doctor Eaton whether, after putting the patient on a specific treatment with some benefit following, he would be justified in deciding that there is specific trouble.

Doctor Eaton replied that he had omitted some of the history. In the right eye there is vision of 20-70 nearly; in the left 20-70. The corneal astigmatism in each eye is 1.50 dioptres, and she accepts R. only + 1.00 sphere, and L. + 0.50s.—0.75c. axis 100, vision with these lenses being R. 20-50 L. 20-40 nearly. The patient's sight had diminished in the last two or three months. He asked whether it was not possible for the patient to have had rickets and lues also. He would not call the teeth "Hutchinson's" teeth, and that is why he had asked whether improvement under specific treatment would indicate a specific taint. A good many patients will improve under iodid, but that does not justify specific disease.

Dr. J. H. Philip asked if there was a history of miscarriages on the part of the mother.

Doctor Eaton, "Not before the patient's birth, but since, one."

Doctor Pond said the teeth were not the kind of Hutchinson's teeth he had seen. He had seen a number of cases during the last few years. The teeth were decidedly notched in the top of the tooth,—a sort of saw tooth.

Dr. A. B. McKee would have hardly said these are Hutchinson's teeth had not Doctor Eaton spoken of it. The characteristic form is the peculiar "peg" shape, which means the loss of the corners; it is not necessary that they come to a sharp point, and he had sometimes found the central surface concave. If there are any characteristics in the patient's teeth, they belong to the rickety type, and not to the Hutchinson type. The patient has also the high-arched palate, and a rather narrow chest.

Dr. Redmond Payne saw all the marks of rickets on the patient. Doctor McKee had mentioned the formation of the chest, high-arched palate, and formation of the teeth. Zonular cataract is accompanied by other conditions generally, which are developed before birth, and they are all congenital, and an arrest of development as contiued after birth as well as in other parts of the body. He saw nothing suggestive of specific taint, and he did not, therefore, see why iodid should be used except as a tonic. He thought that such cases can be improved by improving nutrition, and thus improving the general nutrition of the lens.

Dr. Eaton, closing the discussion, said that the question of the appearance of the teeth did not appear to him to be the exact indication which some of the gentlemen present favor. He had yet to hear of anything that is exactly typical of the so-called Hutchinson's teeth. It has even been denied that Hutchinson's teeth are really reliable indications of specific disease. The idea, he thought, was wrong, that Hutchinson's teeth always have one particular appearance. The patient's teeth are not of that type. He also thought with those who had spoken, that the teeth indicate rickets. He had had the father of the patient under his care about a year before, and found him a dissipated man. This was one reason why he had ordered the iodid. He would refer to "Noyes' Diseases of the Eye" (1890), p. 361, where a cut taken from the cast of the teeth of a young woman, who had never had keratitis, and there had never been syphilis, scrofula, or rickets in the family for three generations. The picture closely resembles the teeth of the patient.

Regular Meeting December 20, 1900.

Dr. Henry L. Wagner, president, in the chair.

MYXOMA OF NASO-PHARYNX.

Dr. Redmond Payne presented a specimen of an exceptionally large myxoma of the naso-pharynx, which had had its origin in the posterior third of the middle meatus. The patient, a man aged 52, had had more or less obstruction to nasal breathing all his life, but had been operated upon a number of times during the past 12 or 15 years for nasal polypi. For six months there had been great difficulty in breathing, and a number of suffocating attacks necessitating sleeping upright. Objectively a large, pear-shaped, glistening tumor was seen hanging from behind the soft palate and resting on the epiglottis and isthmus of the pharynx. It filled the naso-pharynx and pharynx, but as it hung from a pedicle and was rather elastic, couching would displace it forward into the mouth, when the act of swallowing would replace it again in the pharynx. There was a normal right nasal chamber, but there was a glistening mass in the left posterior nares, and further examination showed, by finger and probe behind the palate, that the tumor originated in the posterior third of the middle meatus. Treatment was very simple; the tumor was grasped with a vulsullum passed through the mouth, and, after the use of cocain and supra-renal capsule, a blunt hook found the pedicle readily, and it was cut away with saw-edged scissors. The mass was then drawn out through the mouth. Thorough examination of the nasal chambers showed no polypoid tissue remaining. A remarkable point was that the extraordinary size attained before it was recognized, in spite of the fact that the patient had been operated upon frequently and recently for polypi. The tumor proved to be a fibromyxoma.

Doctor Eaton asked if there was much bleeding.

Doctor Payne said there was not, except that in using considerable pressure with the forceps he had fractured a bit of bone, and there was slight bleeding from it.

Doctor Wagner asked as to the point of origin of the tumor, and as to whether a portion of it was in the naso-pharynx. Fibro-myxoma generally arise in whole or part from the naso-pharynx.

Doctor Eaton had had a similar case of much larger tumor, the base of which covered a surface partly in the vault of the naso-pharynx, and partly in the nasal fossa.

ADVANCEMENT OF RECTI.

Doctor Eaton presented a patient, a man aged 35, upon whom he had done an advancement of the left internal rectus for a divergent strabismus. In 1893, or seven years ago, he was operated upon for left internal strabismus of 25 degrees. Both interni were tenotomized at one sitting, but the operator had done only a moderate operation on the right. The cosmetic effect had been satisfactory at first, but gradually external strabismus had come on, which finally reached 25 degrees.

Patient was wearing R. + 2.25 + 1.50c. ax. 60 degrees; L. + 4.00s. Vision R,, 20 xx; L. 20—lxx. Tropmeter gave: R. Up 30 degrees; Down, 55 degrees; In, 44 degrees; Out, 45 degrees. L. Up, 30 degrees; Down, 55 degrees; In, 32 degrees; Out, 45 degrees. The left internus thus only showing any defect. The ideal treatment theoretically would be advancement of the left internus, with subsequent advancement of the right internus. It was explained to the patient that time would be saved by advancement of the right internus, with simultaneous tenotomy of the left externus. The latter was decided upon, and some encouragement given that binocular vision could be attained, provided the vision of the left eye could be improved. During the operation care was taken not to disturb the tissues overlying the muscle, and muscle, capsule, and conjunctiva were included in the sutures. The immediate effect of the operation was an over-effect of about 15 degrees. Patient was kept in bed with both eyes bandaged for five days. While it is too soon to predict the exact final result, the maintenance of a slight over-effect at the end of three weeks, with double images, promises well. The vision of the left eye had been brought up by correction of astigmatism and stereoscopic exercises to nearly 20-40. Dr. Eaton believed that the principle laid down that a tenotomy or advancement of a given muscle should be followed by a similar operation on the same muscle of the fellow eye, should be adhered to whenever possible, and especially when the restoration of binocular vision is to be, as it should be, the object.

OBITUARY.

W. G. HAY, M. D.

"The death of W. G. Hay, M. D., a member of this society, is deeply felt by all who were associated with him. Dr. Hay was principally identified with the study of diseases of the skin, in which branch he had laid the foundation of a brilliant career if he had been spared. Nature had provided him with a keen wit and a scientific turn of mind, and added to these were all the advantages of coming from a family fond of culture. He had a natural turn for anatomy, and he was a long time connected with the anatomical department of the University of California. He was also a lecturer on 'Anatomy as Applied to Art' in the Mark Hopkins Institute of Art. He had, however, not stopped being a mere gross anatomist, but had fitted himself well in embryology and histology. His investigations on the occurrence of sebaceous glands in the mucous membrane of the mouth are well known, and indicate what his capabilities were. In skin diseases his work on herpes zoster is a model of scholarly investigation. The work that a man turns out is only the flower of his acquirements, and represents a small part of his learning and culture. This was eminently true of W. G. Hay."

BOOK NOTICES.

"The Physician's Visiting List (Lindsay & Blakiston's) for 1901." Fiftieth year of its production. Philadelphia, P. Blakiston's Son & Co. For fifty years a standard companion of the busy practitioner, and improved every season, until now it is most compact, complete, and satisfactory.

LICENSES GRANTED.

5761 Manahan, Thos. J., San Francisco, June 28, 1899, Medical Department Harvard University, Mass.

5762 McClelland, Sophia J., Los Banos, July 5, 1900, College Physicians and Surgeons, San Francisco, Cal.

5763 Outlaw, John Sutton, Washington, D. C., May 15, 1891, Medical Department Howard University, Washington, D. C.

5764 Peck, Anna Dixon, Sacramento, June 5, 1900, Cooper Medical College, Cal.

5765 Rolls, James Alfred, Watrous, N. M., Aug. 11, 1895, University of Toronto, Canada.

5766 Schlosser, Alfred G. R., Los Angeles, Feb. 1, 1871, Rush Medical College, Ill.

5767 Standring, John Ashworth, Goshen, N. Y., April 24, 1899, Medical Department University of Denver, Colo.

5768 Stokes, William H., Toronto, Ohio, Feb. 24, 1882, Columbus Medical College, Ohio.

5769 Straw, Edwin E., Klamath Falls, Or., March 30, 1898, Medical Department Vanderbilt University, Tenn.

5770 Sweeney, George Joseph, San Francisco, May 15, 1900, Medical Department University of California.

5771 Van Pelt, Gertrude Wyckoff, San Diego, March 12, 1886, Woman's Medical College, Penn.

5772 Wyckoff, Lydia Jane, San Francisco, April 6, 1886, Woman's Hospital Medical College, Chicago, Ill.

5773 Wylie, Winifred, Phoenix, A. T., Feb. 21, 1877, Rush Medical College, Ill.

5774 Young, John P., Empire, Ohio, April 17, 1894, Nov. 7, 1900, Baltimore Medical College. Md.

5775 Adams, Herman G., Sacramento, April 4, 1898, Starling Medical College, Ohio.

5776 Adams, John Milton, Spokane, Wash., Feb. 21, 1882, Rush Medical College, Ill.

5777 Alexander, Paul Clifton, San Francisco, June 5, 1900, Cooper Medical College, Cal.

5778 Baird, Alfred Richard, Pepstone, Can., June 8, 1894, University of Manitoba, Canada.

5779 Bates, Mary E., Denver, Colo., Feb. 25, 1882, Woman's Medical College, Chicago, Ill.

5780 Boyd, Leslie C., Los Angeles, June 14, 1900, Medical Department University Southern Cal.

5781 Chaffee, Frank, Berkeley, June 28, 1888, Medical Department University of Michigan.

5782 Chakijian, Henry K., San Francisco, March 17, 1897, Cleveland College Physicians and Surgeons, Ohio.

5783 Chenoweth, William James, Chico, March 3, 1853, Medical Department University, Louisville, Ky.

5784 Cipelli, Savino, San Francisco, July 24, 1872, Royal University, Parma, Italy.

5785 Cranston, Augustus, St. Johnsbury, Vt., June 17, 1893, Medical Department University of Vermont.

5786 Crawford, John, San Juan, March 8, 1887, Columbus Medical College, Ohio.

5787 Curdts, Carl E., Oakland, July 5, 1900, College Physicians and Surgeons, San Francisco, Cal.

5788 Edwards, Samuel G., Los Angeles, April 6, 1893, Medical College of Ohio.

5789 Farrell, Francis Albert, Redlands, May 2, 1893, Jefferson Medical College, Pa.

5790 Flora, G. Edward, Igo, April 19, 1895, Baltimore Medical College, Md.

5791 Gatchell, Willis L., Chico, July 13, 1882, Medical School of Bowdoin, Maine.

5792 Goodman, Charlotte E., Denver, Colo., May 3, 1893, Woman's Medical College of Pennsylvania.

5793 Halton, Mary Gertrude, Alameda, June 5, 1900, Cooper Medical College, Cal.

5794 Higgins, Aubrey F., Rhonerville, June 13, 1895, Medical Department University of Pennsylvania.

5795 Hinz, Alois F., Minneapolis, Minn., March 25, 1886, Omaha Medical College, Nebraska.

5796 Jennings, George Darvin, Covena, June 15, 1899, Northwestern University Medical School, Ill.

5797 Johnson, Hartland Cyrus, St. Paul, Minn., March 10, 1885, College Physicians and Surgeons, Chicago, Ill.

5798 Keyes, Henry Sheridan, Los Angeles, Dec. 16, 1899, University of the South Tennessee.

5799 Lewis, James M., St. Petersburg, Fla., March 10, 1850, Jefferson Medical College, Pa.

5800 Lewis, William Henry, Santa Barbara, March 1, 1865, Bellevue Hospital Medical College, New York.

5801 Lockwood, Charles D., Pasadena, June 11, 1896, Northwestern University Medical School, Ill.

5802 Logan, Hugh, The Dalles, Or., March 15, 1872, St. Louis Medical College, Mo.

5803 Logan, Raymond W., The Dalles, Or., April 2, 1900, Medical Department University of Oregon.

5804 Loomis, M. L., Los Angeles, June 14, 1900, Medical Department University Southern Cal.

5805 Methvin, B. J., Tacoma, Wash., 1888, Medical Department University of Tennessee.

5806 McChesney, George Jewett, San Francisco, May 15, 1900, Medical Department University of California.

5807 Moorman, J. W., San Francisco, March 1, 1865, Kentucky School of Medicine, Ky.; Feb. 6, 1867, Medical Department University, Louisville, Ky.

5808 Murray, Charles Hugh, San Francisco, April 26, 1889, College Physicians and Surgeons, Edinburgh and Glasgow, Scotland.

5809 Pollatsek, Jacobus, San Francisco, Nov. 23, 1878, University of Buda Pesth, Hungary.

5810 Reinhardt, George Frederick, San Francisco, May 15, 1900, Medical Department University of California.

5811 Rucker, Lucy Myra, Lewiston, Maine, Dec. 5, 1895, Cooper Medical College, Cal.

5812 Simpson, Frank William, Byron Hot Springs, May 15, 1900, Medical Department University of California.

5813 Skeel, Donald W., Los Angeles, June 16, 1899, Medical Department University of Southern Cal.

5814 Stenile, Henry F., Burlington, Vt., April 9, 1890, Gross Medical College, Denver, Colo.

5815 Takeshima, K., San Francisco, Oct. 10, 1884, Aichi Medical College, Japan.

5816 Turman, Ira L., Bakersfield, March 13, 1894, Medical Department University of Louisville, Ky.

5817 Weaver, Charles Albert, New Boston, N. H., June 27, 1881, Medical Department University of Vermont.

5818 Wilder, Edwin M., San Francisco, May 15, 1900, Medical Department University of California.

Chas. C. Wadsworth, M. D.

5819 Bartlett, David J., Scribner, Neb., March 31, 1892, Omaha Medical College, Neb.

5820 Belitz, Alfred, East San Jose, April 2, 1895, College Physicians and Surgeons, Chicago, Ill.

5821 Boulton, Eleanore F., Franklin, Pa., May 16, 1900, Woman's Medical College of Pennsylvania.

5822 Brown, Allie Henry, Baker City., Or., May 15, 1900, Jefferson Medical College, Pa.

5823 Chenoweth, M. S., Denver, Colo., March 4, 1890, Missouri Medical College, Mo.

5824 Collins, T., Shields, Globe, Ariz., June 17, 1886, Hospital College of Medicine, Louisville, Ky.

5825 Corey, Jasper W., Sacramento, March 8, 1889, St Louis College Physicians and Surgeons, Mo.

5826 DeMacy, C. F., San Francisco, March 6, 1894, Louisville Medical College, Ky.

5827 Dixon, Charles Leonard, Grafton, May 15, 1895, Jefferson Medical College, Pa.

5828 Dobson, Havelock Lindley, Ashland, Me., March 30, 1891, Bellevue Hospital Medical College, N. Y.

5829 Donald, Wm. B. L., San Bernardino, June 13, 1900, University of Toronto, Canada.

5830 Edwards, Wm. R. J., San Francisco, March 23, 1897, University Medical College, Kansas City, Mo.

5831 Ellis, Katie E. Wadsworth, San Francisco, July 1, 1890, Cincinnati College Medicine and Surgery, Ohio; April 5, 1893, Women's Medical College, Cincinnati, Ohio.

5832 Farrow, Edgar James, San Francisco, May 15, 1900, Medical Department University of California.

5833 Gingles, Wm. W., Castana, Ia., June 19, 1880, Kentucky School of Medicine, Ky.

5834 Gray, Kittie Plummer, Portland, Or., April 3, 1889, Medical Department University of Oregon.

5835 Hammond, Charles L., Redlands, April 21, 1898, College Physicians and Surgeons, Chicago, Ill.

5836 Henoy, Joel F., Brownsville, Or., Feb. 27, 1883, Cincinnati College Medicine and Surgery, Ohio.

5837 Major, Elverton E., Redlands, Feb. 26, 18-8, Rush Medical College, Ill.

5838 McNutt, Wm. Fletcher, San Francisco, June 27, 1900, Medical Department Harvard University, Mass.

5839 O'Rourke, Wm. P., Seattle, Wash., April 7, 1897, Toledo Medical College, Ohio.

5840 Palmer, Edwin O., Prospect Park, Oct. 19, 1896, College Physicians and Surgeons, N. Y.

5841 Parker, Hal M., Delta, Ohio, Feb. 28, 1889, Michigan College Medicine and Surgery, Mich.

5842 Patterson, Edward B., Manistique, Mich., July 1, 1886, Medical Department University of Michigan.

5843 Perdue, Labon C., San Jose, March 4, 1880, Missouri Medical College, Mo.

5844 Reed, R. Hugh, Rock Springs, Wyo., March 10, 1876, Medical Department University of Pennsylvania.

5845 Smith, Lawrence B., San Jose, March 3, 1886, Medical Department Western Reserve University, Ohio.